TEXTILE WORLD

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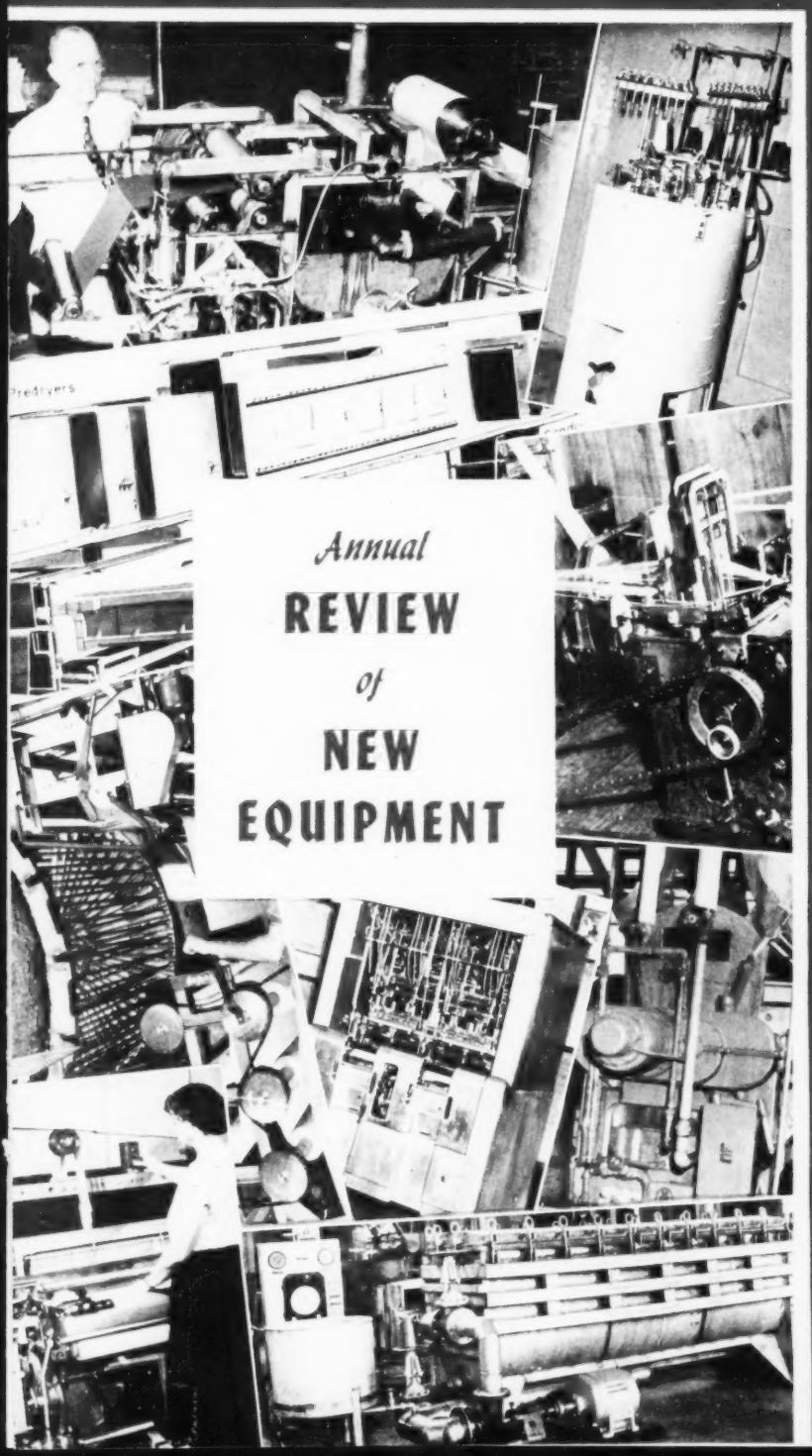

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Annual Mill Check-Up Number

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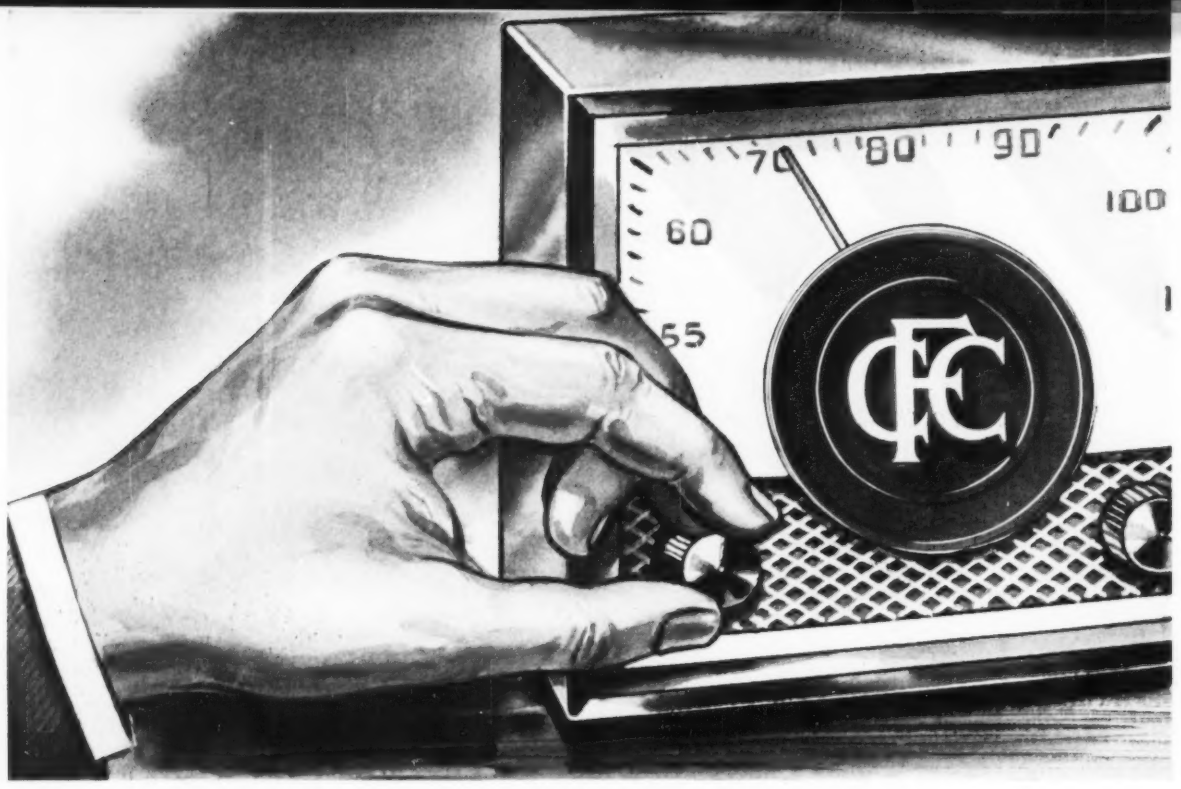

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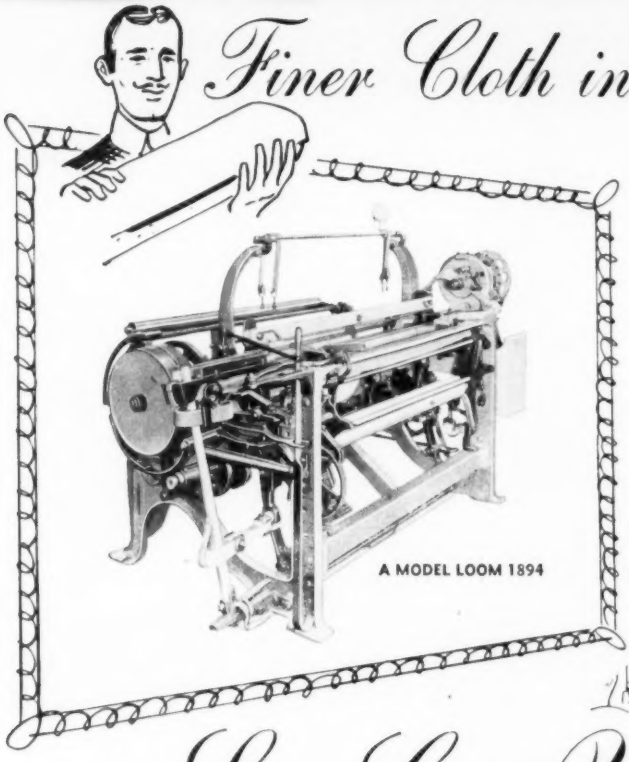

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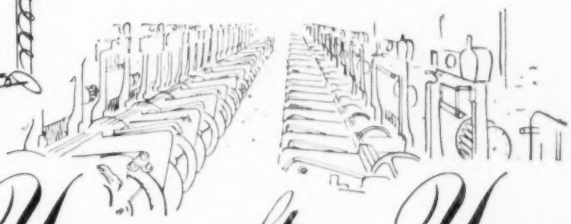

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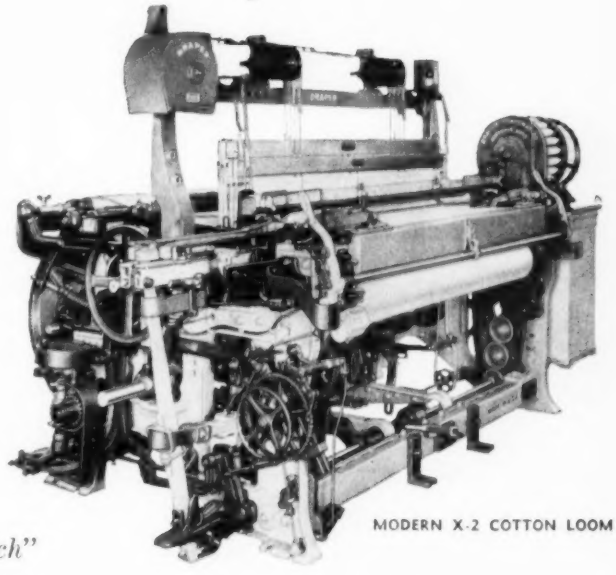

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THE Long-Range VIEW

Your Workers Don't Like Their Mill Management

Mill management is held in poor regard by mill workers. Unpleasant as this statement is, it is based on facts that are hard to argue with.

In September we published an article on worker attitudes uncovered in a study of eight mills. For the last two months, this page has been devoted to discussions of two groups of attitudes covered by the study, one on what workers think of their jobs and the other on what they think of their supervisors. This month we discuss the third, and last, group: what workers think of mill managements.

Workers in the eight mills were asked questions that reflected their attitudes on seven measurements of mill management.

The measurements, listed according to the way mill managements rated, were:

Worst
- How job vacancies are filled
- How the mill rates in comparison with other places to work

Second Worst
- Worker pride in company
- Management competence
- Community relationships

Best
- Fairness in making time allowances
- Rating of company

Only on the last measurement, "Rating of company," did mill managements equal all-industry averages.

What is wrong that mill managements should rate lower on practically all worker-attitude measurements?

The best way to find out is to study the list of attitudes and reflect seriously on what management is guilty of that would cause such poor opinions among workers.

The management policy that workers are most dissatisfied with is how job vacancies are filled. It is probable that in this practice, more than in any other, mill managements still have the outdated attitude that "It's my mill. I'll give jobs away as I want to."

We have seen many different approaches to the problem of filling job vacancies. In our opinion, it is a moot question as to which is the worst of all methods: seniority, or leaving it to the supervisor's judgment. Seniority, whether or not it is intended so in the beginning, comes to outweigh all other qualifications and leads to wholesale resentments. Leaving vacancy filling to the judgment of the supervisor depends too much on the caliber of the supervisor, and in too many instances the caliber is rather low.

The fact that management's rating was so far below the U.S.-industry average is proof that some industries have found better methods of filling job vacancies than the textile industry has found. A mill management would be wise indeed, in view of the extremely poor score on this point, to search out and adopt some method that is more equitable, more effective, and more acceptable to workers.

The second poorest rating of mill managements was in how they rate in comparison with other employers. This measurement might also be called: "What sort of an outfit to work for is your mill?

Everyone knows that there are some mills in the industry that practically everyone tries to avoid working for. "I wouldn't touch that mill with a ten-foot pole" is an expression heard rather frequently.

However, it would come as a genuine surprise to many mill managements to learn that their workers thought their company a rather poor place to work. But it is a good bet that such is the case. The eight mills studied may be considered average or representative mills. Their average score was 69.25, compared to an average of 70 for the whole textile industry. If the average score in these eight mills and for the textile industry is so far below the U.S.-industry average, it is certain that most mills have plenty of room for improvement.

If we go down the whole list of measurements given here, courses of action for improvement immediately suggest themselves. Several things—already proved in other industries and in an occasional mill—can be done to win the respect of workers. They cost a little money, entail much thought and consideration, and—the highest price of all—require a changed point of view on the part of most mill managements.

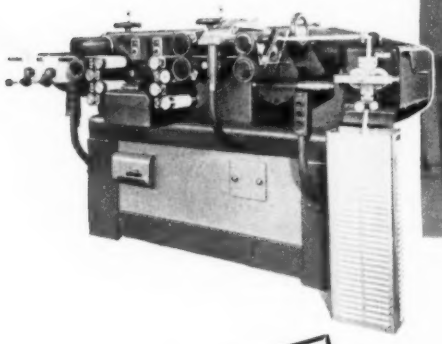
Is it worth it?

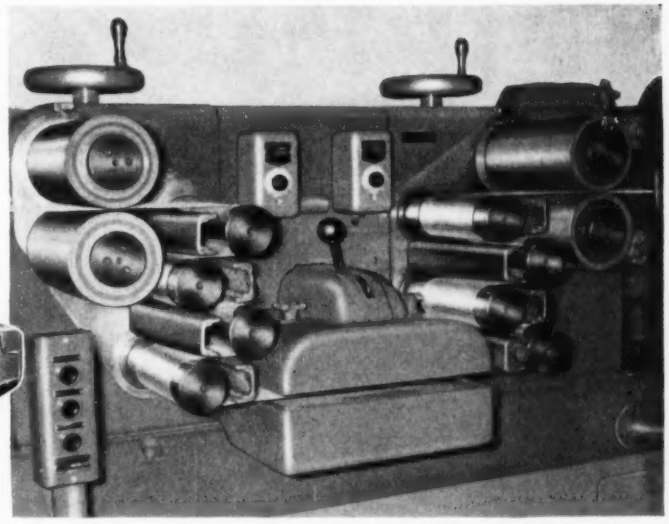
The answer lies in the labor costs of your mill.

D. M. Thomas

SOFTER HAND

and stronger fibers with the TURBO STAPLER





Drawing zone of the Turbo Stapler showing nip and snub rolls, and heating plates. Left: The Turbo Stapler, tow feeds in on the left, crimped staple drops into roving can on the right.

Facts About TURBO Tow Processing . . .

LOWER COST

(1) Less capital expense for machinery, less space, less skilled labor.
(2) Pre-roving operations reduced to a new minimum — drawing can be simplified because sliver is amazingly even and parallel.

VERSATILITY

(1) handles all synthetic tow.
(2) minimum down-time for change over to different fibers, deniers, staple lengths or crimp.
(3) additional end uses for your present inventory through alteration of staple length, filament denier, crimp and tenacity.

EVEN YARNS

(1) sliver is more even — it's made from uniform tow.
(2) no co-terminal fibers — natural staple length variation.
(3) staple length can be controlled to match natural fibers — better blends.

The Turbo Stapler — the new short-cut to synthetic fiber spinning — produces a sliver of controlled staple length from tow. It will process tow up to nine inches wide, tension and heat it, remove crimp and reduce denier if desired, reduce the tow to staple and then replace any desired crimp — all without skilled labor.

Illustrated above is the drawing zone. Here the tow passes through the two nip rolls on the left, then through four snub rolls. The tow then goes between two heating plates with individual thermostats. The top plate may be raised and only the bottom one used. After being heated the tow passes through four more snub rolls and two nip rolls. These operate at a greater speed than the first set of rolls. The resulting stretch, which is adjustable, can give the fibers a softer, more luxurious hand. Up to 50% more fiber strength.

The basic purposes of the drawing zone are to drive off excessive moisture, to tension fibers for even breaker zone feeding, and to help form the tow to an even ribbon. It's the extra benefits though, that make a Turbo Stapler so valuable. You get the desired hand — softer or crisper. Depending on fiber characteristics, you can reduce denier one half. You get increased tensile strength. You get fibers crimped exactly as you want them. You can drastically cut drafting and doubling operations.

Write for a copy of the "Turbo Stapler". It gives the complete story on the new, efficient short-cut to synthetic fiber spinning.

TURBO SINCE 1929

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Makers of Precision Hosiery Finishing Machines — Crimpers — Crimp Setters

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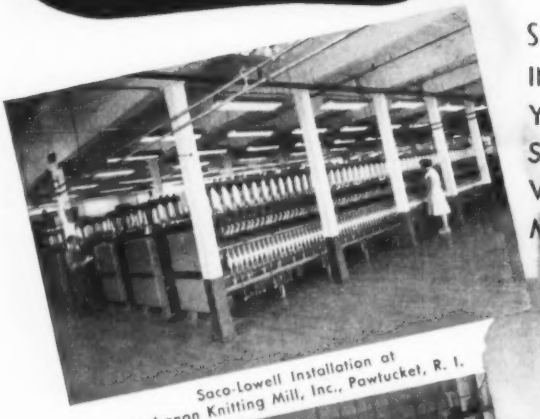
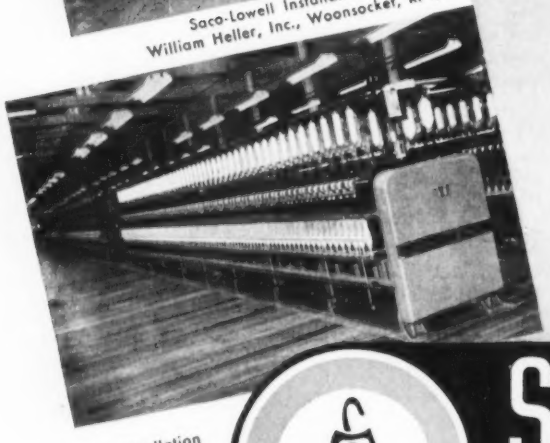


Saco-Lowell Installation at Lebanon Knitting Mill, Inc., Pawtucket, R. I.

Saco-Lowell Installation at William Heller, Inc., Woonsocket, R. I.



Saco-Lowell Installation at Wanskuck Co., Providence, R. I.

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Manufacturers of worsted and blended yarns, seeking BETTER QUALITY at worthwhile savings will find, through a survey made by Saco-Lowell engineers and technicians, the means to reach their objective.

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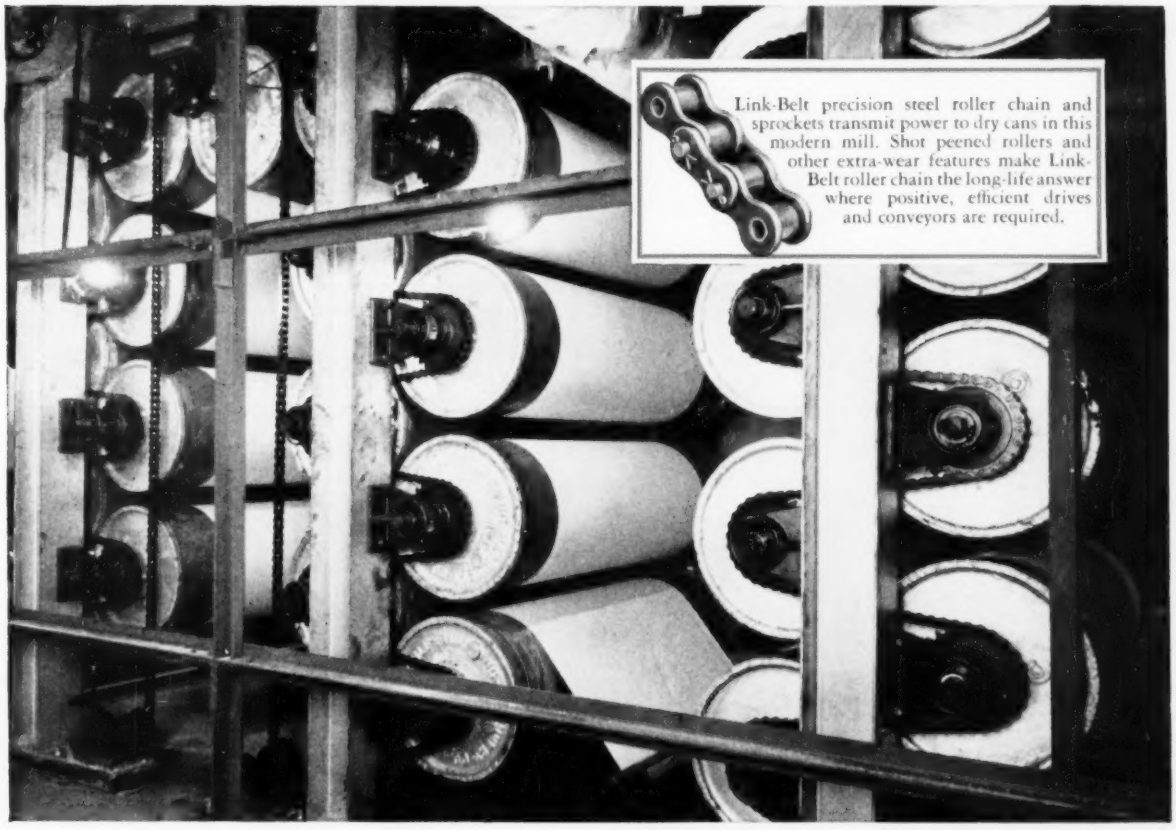
Is there one chain that best meets your drive or conveyor problem?



Link-Belt precision steel roller chain and sprockets transmit power to dry cans in this modern mill. Shot peened rollers and other extra-wear features make Link-Belt roller chain the long-life answer where positive, efficient drives and conveyors are required.

You'll find the answer in LINK-BELT's complete chain line... a size and type for every job

The application shown above is an example of how you can select the *one* chain best suited for a particular need from the complete Link-Belt line. And each chain is engineered to provide more efficient service at lower cost than so-called general purpose chain.

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LINK-BELT

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Preferred for its improved micro-spray

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AMCO NO. 6 ATOMIZERS are made to close tolerances; of metals with proved resistance to erosion, corrosion and mechanical wear. They are automatically self-cleaning with each cycle of operation . . . and are of such simple, well engineered design that servicing, if required, is easily performed.

AMCO NO. 6 ATOMIZER is actuated by a highly sensitive humidity control, a product of Amco's advanced engineering and 65 years of experience with humidification problems. This control reacts faster than anything previously obtainable. It means relative humidity held to the exact specified percentage hour after hour, day in and day out, under *every* condition.

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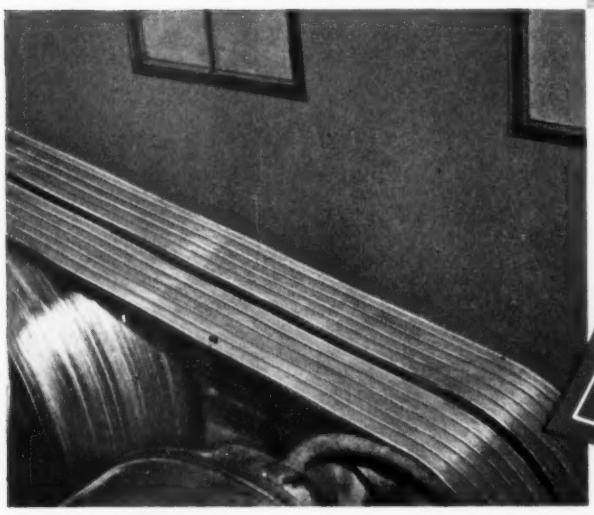
Humidification • Evaporative Cooling (Ductless or Central Station) • Refrigeration

AMERICAN MOISTENING COMPANY, PROVIDENCE, R. I. • ATLANTA • BOSTON • CAMDEN • CHARLOTTE • AFFILIATED WITH GRINNELL COMPANY, INC.

For more information, write direct or use Reader Service post card.

6 YEARS'
Trouble-Free Service



GOODYEAR INDUSTRIAL PRODUCTS
GTM-Specified
STEEL CABLE V-BELT DRIVE FOR SWING GENERATOR ON DRAGLINE
68.5"
DRIVEN PULLEY 58" O.D. FLAT PULLEY
MOTOR PULLEY 21.6" PD 11 GROOVE-QD SHEAVE ON 87.5 KW GENERATOR (150-175 H P-725 RPM)

Heavy dust and severe overloading conditions caused rapid failure, frequent replacement and costly shutdowns on the swing generator on this big dragline.

Drive was redesigned by the G.T.M.—Goodyear Technical Man—as a V- to flat-pulley drive, and fitted with matched Steel Cable V-Belts. These rugged belts, muscled with endless, airplane type steel cables, ran for six years with no trouble of any kind. And they had plenty of drive left when accidental damage required their replacement.

Goodyear, Industrial Products Division
Akron 16, Ohio

YOUR GOODYEAR DISTRIBUTOR *can quickly supply you with Hose (air, water, steam, oil, special), Belting (V-belts, transmission, conveyor, elevator), and other industrial rubber products. Look for him in the yellow pages of your telephone directory under "Rubber Products" or "Rubber Goods."*

GOODYEAR

THE GREATEST NAME IN RUBBER

We think you'll like "THE GREATEST STORY EVER TOLD"—every Sunday—ABC Radio Network—THE GOODYEAR TELEVISION PLAYHOUSE—every other Sunday—NBC TV Network

 For more information, write direct or use Reader Service post card.

NOPCOSTAT* anti-static oils

Your present anti-static oil is doing only half its job if it does not give *"Balanced" Performance* — fiber-to-metal lubricity (coefficient of friction), fiber-to-fiber cohesion, anti-static control.

Every NOPCOSTAT anti-static oil gives you all these properties plus outstanding spreadability, freedom from yellowing and rancidity, and complete scouring out.

Give NOPCOSTATS a trial today. You'll find that years of Nopco research and experience in supplying anti-static products for the textile industry means *"Balanced" Performance* for you in processing your synthetics, woolens, worsteds, and blends.

*Reg. U. S. Pat. Off.

BALANCED PERFORMANCE

NOPCO

NOPCO EVOLVED THRU RESEARCH

CHEMICAL COMPANY Harrison, N. J.

Branches: Boston • Chicago • Cedartown, Ga. • Richmond, Calif.

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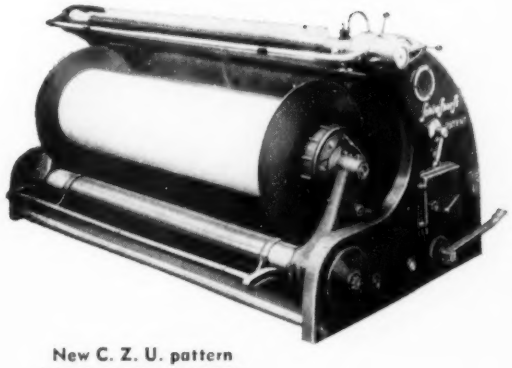
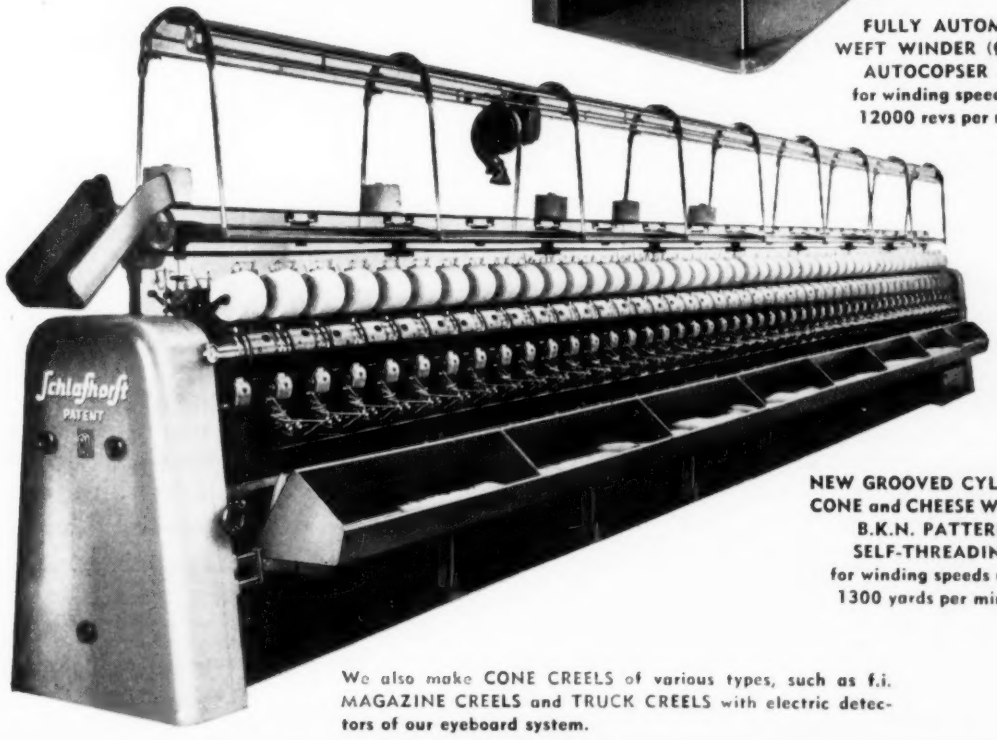
MODERN MACHINERY FOR WINDING AND WARPING

....Schlafhorst.... unionmatex



New C. Z. U. pattern
HIGH SPEED WARPER
Extraordinary production
Greatest simplicity

FULLY AUTOMATIC WEFT WINDER (QUILLER) AUTOCOPSER A.S.E.
for winding speeds up to 12000 revs per minute



NEW GROOVED CYLINDER CONE and CHEESE WINDER B.K.N. PATTERN SELF-THREADING
for winding speeds up to 1300 yards per minute

We also make **CONE CREELS** of various types, such as f.i. **MAGAZINE CREELS** and **TRUCK CREELS** with electric detectors of our eyeboard system.

W. SCHLAFHORST & CO · M.GLADBACH · GERMANY

Notice the CONCAVE SIDES of the Gates V-Belt-

(U.S. PATENT NO. 1813698)

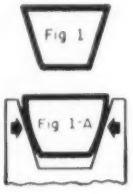
. . . that's why Gates V-Belts Last Longer!

Look at this!

In *half a minute* you can prove for yourself the belt-saving advantage of the CONCAVE SIDES.

Take any *straight-sided* V-Belt (Fig. 1) and bend it as it bends in going around its pulley. At the same time, grip its sides with your fingers and *feel* those sides *bulge out* as in Fig. 1-A.

Clearly, those bulging sides will press *unevenly* against the V-pulley—and this causes extra wear at the points shown by the arrows (Fig 1-A).

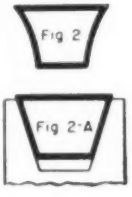


Typical Gates Vulco Rope Drive—the Gates V-Belts are built with Concave Sides to insure longer belt wear.

Now bend a Gates Vulco Rope with CONCAVE SIDES (Fig. 2)

As the belt bends, grip its sides—and you will feel the precisely engineered CONCAVE SIDES *fill out* to an *exact fit* in the sheave groove (Fig. 2-A).

These sides press *evenly* against the V-pulley. All wear is distributed *uniformly* across the full width of the Gates Vulco Rope—and this means *longer* belt life and *lower* belt costs for you!



When you buy V-Belts, be sure to get the V-Belt with the CONCAVE SIDES— The Gates Vulco Rope.

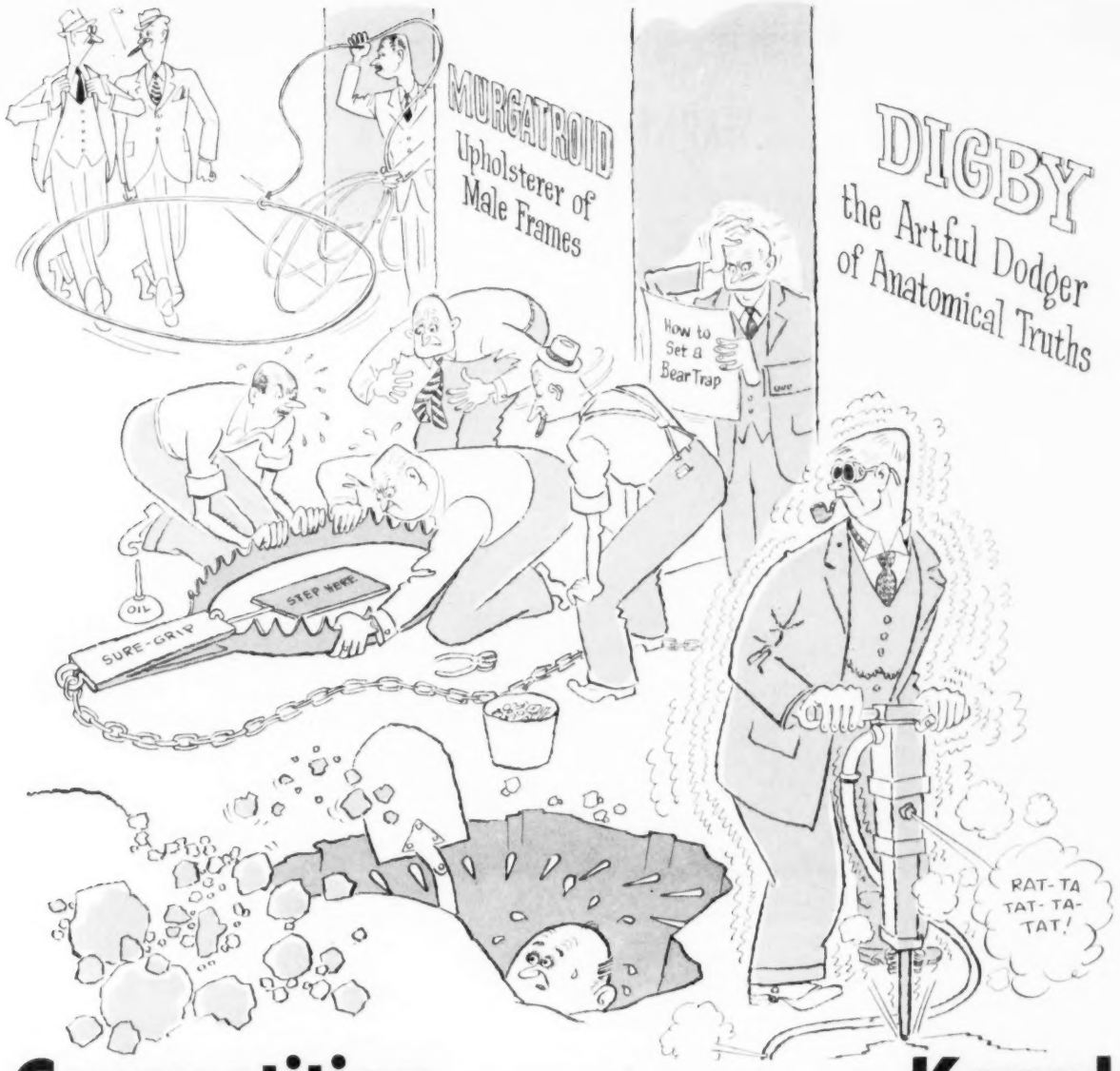
Gates Engineering Offices and Jobber Stocks are located in all industrial centers of the United States and in 71 foreign countries.

CS-537

V-Belts — Hose Molded Rubber Goods for industry World's Largest Maker of V-Belts

Gates® VULCO ROPE DRIVES

THE GATES RUBBER COMPANY • DENVER, U.S.A.



Competition is (pardon the expression!) Keen!

. . . and competition begins in the WEAVEROOM!

The Great Merchandising Sweepstakes never had so many entries before. And buyers "never had it so good."

Every sales appeal in the book is being forcefully used . . . and some potent new ones are being written. But when all is said and done, and the customer is still on the fence . . . every good salesman goes back to good old, dependable Fundamental No. 1: *Fabric-quality* . . . wearability . . . the ability to keep looking new, regardless of hard and unremitting wear.

That quality is what has put the brand-trademarks of so many mills among the most valuable commercial properties in the world. And back of many of those trademarks stands the "invisible trademark" of C&K . . . builders of the world's longest line of automatic filling mixing and call-box looms that enable *any* weaveroom to remain successfully competitive in *any* market-situation.

This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Fabrics . . . which are WOVEN Fabrics.

Crompton & Knowles Loom Works

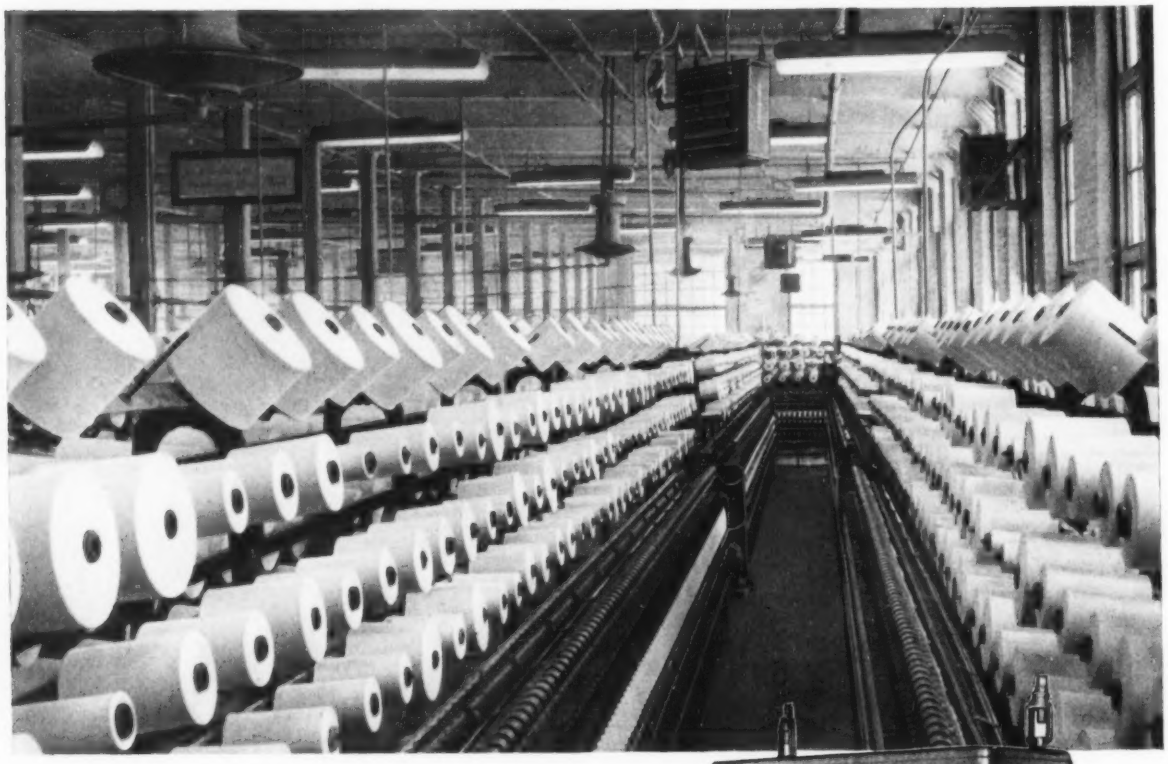
WORCESTER 1, MASSACHUSETTS, U. S. A.

PHILADELPHIA, PA. • CHARLOTTE, N. C. • ALLENTOWN, PA.
CROMPTON & KNOWLES JACQUARD & SUPPLY CO., PAWTUCKET, R. I.

Mark this Date Now . . . April 26-30, 1954 AMERICAN TEXTILE MACHINERY EXHIBITION, ATLANTIC CITY

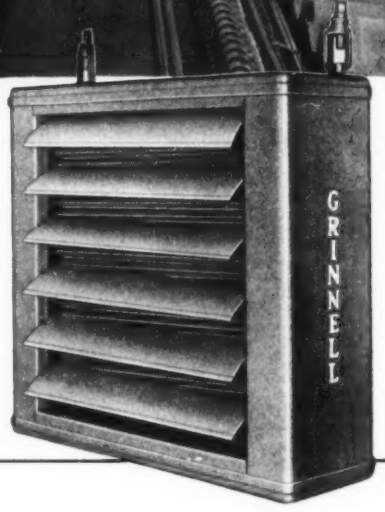
Don't let temperature readings drop below

85°F. ... WARNED THE HEATING SPECIFICATIONS



Heating specifications for the Coats & Clark Inc. mill at Acworth, Ga., were clear and emphatic. Because of the nature of the material being processed, the temperatures had to be maintained at 85 F. (or better). Despite a prolonged cold spell which sent outside temperatures tumbling to record lows, Textile Thermoliers, the Grinnell Unit Heater, met the specifications to the letter. Textile Thermoliers provide maximum capacity at all times . . . their special heating element stays cleaner, assuring efficient heating with minimum servicing. No wonder this mill is another *enthusiastic booster* for Grinnell Unit Heaters.

Perhaps you saw the recent page advertisement by Grinnell, appearing in this publication, which listed more than 35 textile mills using Textile Thermoliers. On the list (though by no means complete) were such names as Cannon, American Thread, Dan River, Julliard and Springs Cotton These successful operators should provide a most persuasive reason for you to check the advantages of Thermolier Unit Heaters. The box at the right gives additional excellent reasons for taking *prompt action.*



- Parallel openings between the web tubes permit air from the fan to pass through and keep heating element clean.
- Maximum capacity provided at all times and annoying and destructive water hammer eliminated because built-in pitch of tubes and internal cooling leg assures continuous drainage of the condensate.
- Safety and durability assured with leak-proof tube-to-header construction.
- Plain thermostatic trap, the simplest and least expensive kind of trap, made practical because of Thermolier's exclusive internal cooling leg.

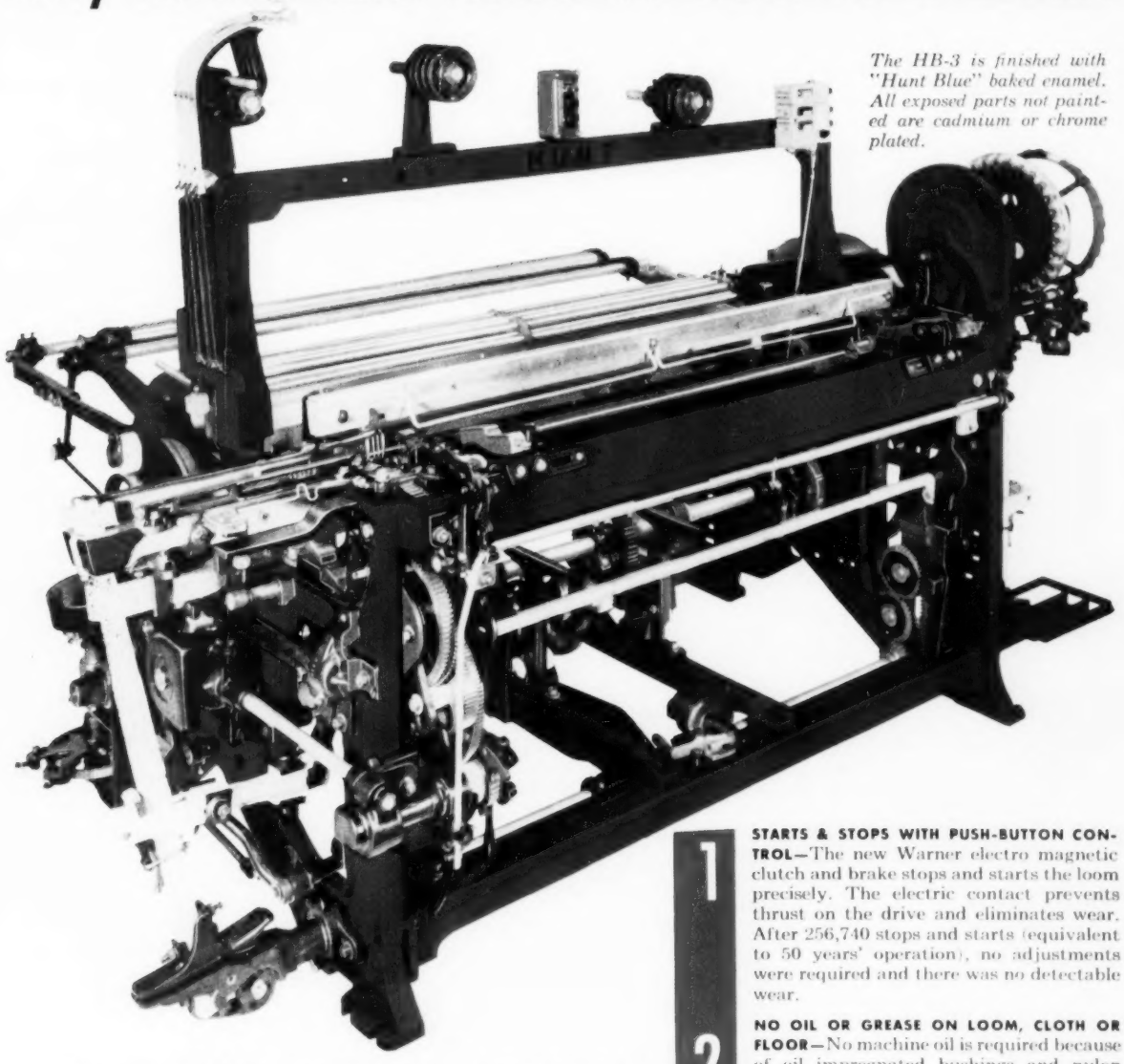
GRINNELL

TEXTILE UNIT HEATERS

Grinnell Company, Inc., Providence, Rhode Island • Coast-to-Coast Network of Branch Warehouses and Distributors

pipe and tube fittings • welding fittings • engineered pipe hangers and supports • Thermolier unit heaters • valves
Grinnell-Saunders diaphragm valves • pipe • prefabricated piping • plumbing and heating specialties • water works supplies
industrial supplies • Grinnell automatic sprinkler fire protection systems • Amco air conditioning systems

Why Borden Mills Chose the Hunt HB-3 Loom!



The HB-3 is finished with "Hunt Blue" baked enamel. All exposed parts not painted are cadmium or chrome plated.

The new HB-3 Loom, conceived and developed by Borden Mills and Hunt Loom & Machine Works, Inc., has 4 main features that are the main reasons why Borden picked the Hunt HB-3.

1 **STARTS & STOPS WITH PUSH-BUTTON CONTROL**—The new Warner electro magnetic clutch and brake stops and starts the loom precisely. The electric contact prevents thrust on the drive and eliminates wear. After 256,740 stops and starts (equivalent to 50 years' operation), no adjustments were required and there was no detectable wear.

2 **NO OIL OR GREASE ON LOOM, CLOTH OR FLOOR**—No machine oil is required because of oil impregnated bushings and nylon gears against metal gears. Sealed bearings require only a once-a-year greasing. Results are reduced seconds, because of no grease on cloth, in addition to time saving from oiling and greasing loom.

3 **70% LESS REPLACEMENT PARTS**—There are 55 less parts on the HB-3 Loom than on other standard models. This fact, plus the reduced wear from nylon gears against metal gears, reduce replacement parts by 70%.

4 **EASE AND COMFORT FOR EMPLOYEES**—The weaver's physical labor is lowered because of push-button control. The proper humidity pulled through the warp yarn into a floor duct practically eliminates lint and dirt, making the weave room as clean and healthy as the most modern office.

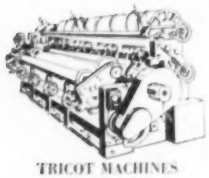
Write, wire or telephone Hunt today for more details on the new Hunt HB-3 loom.

HUNT LOOM & MACHINE WORKS, INC.

200 ACADEMY ST. • GREENVILLE, S.C.

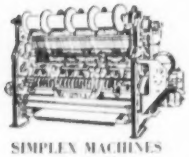
LOOMS & LOOM PARTS • SPREADERS • MOTOR DRIVES
HYDRAULIC CRANKSHAFT PRESSES • SIZE PUMPS

The Reiner Line:

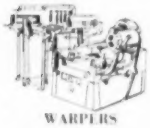


TRICOT MACHINES

RASCHEL MACHINES

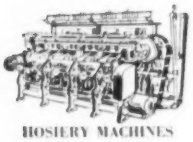


SIMPLEX MACHINES

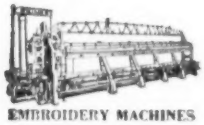


WARPERS

CREELS



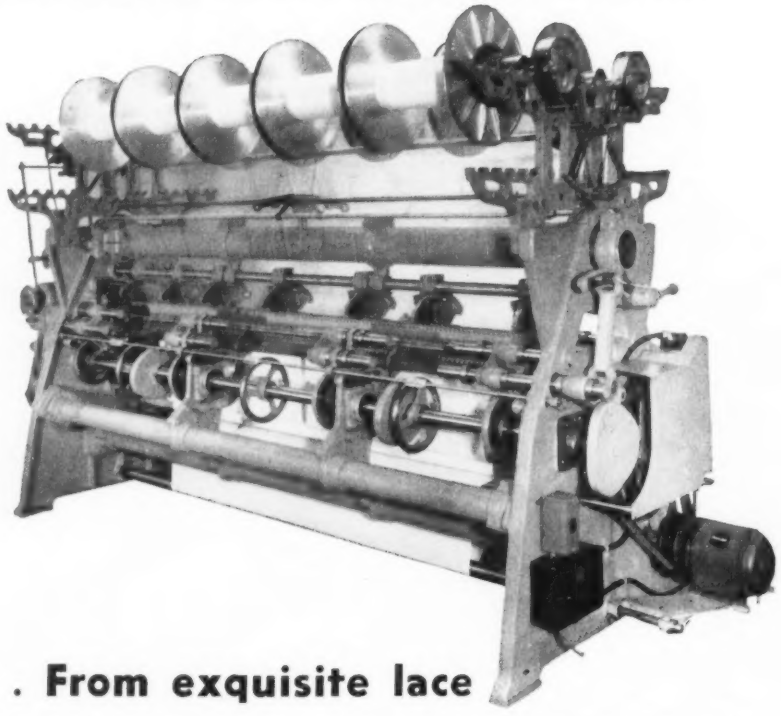
HOSIERY MACHINES



EMBROIDERY MACHINES

Ready spare part service available for all Reiner equipment.

NOW!
TWO REINER RASCHEL MODELS for A PROFITABLE and GROWING MARKET



. . . From exquisite lace

and tulle fabrics to shoe tops, elastic power nets, draperies—from finest denier nylon to coarse gauge metallic or plastic yarns. These and other goods can be made profitably on Reiner Raschel units.

For this market, we offer a unit with up to 8 guide bars and many attachments for special effects and constructions. Fast, versatile machines with one or two needle bars —Gauges 24—36—40, or as required. Rigidly built to withstand top speeds.

Another model offers up to 56 gauge and up to 5 guide bars. A fast, newly constructed unit with redesigned knitting elements and cams. Suited for elastic power nets, tulles or coarser goods. It operates at highest Raschel speeds, producing unexcelled fabrics at a steady clip and 'round the clock.

Both models take beams up to 21" diameter. Pattern wheel or chain link drives. Both are tops in Raschel knitting!

And remember, only Reiner offers a full line of warp-knit machines—Tricot, Simplex, Raschel—plus all required Creels and Warpers.

Ask for our richly illustrated catalogs.

1903 50th Anniversary 1953

ROBERT REINER INCORPORATED

10 MINUTES FROM TIMES SQUARE

Take Bus Nos. 61 or 67, from Platform No. 60, Port Authority Bus Terminal, 41st Street and 8th Avenue, New York City. Get off at Pleasant Avenue, Weehawken, New Jersey. From there turn left and walk through the underpass up to Gregory Avenue . . . TELEPHONE: UNION 7-0502, 0503, 0504, and 0505. From New York City call LONGACRE 4-6882.

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well suited for suitings

NATIONAL ALIZAROL CYANONE BLL

An excellent color for compound shades, this useful National Dye has good fastness to washing, light and fulling; very good fastness to hot pressing, rubbing and peroxide bleach; excellent fastness to water, carbonizing, stoving, spotting and steaming. It is applicable by all three chrome methods.

When you require a blue chrome shading color, we suggest that you investigate the merits of National Alizarol Cyanone BLL. Our nearest branch can arrange for prompt shipment from warehouse stocks in principal textile centers.

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ALLIED CHEMICAL & DYE CORPORATION
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Allied Chemical

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NEW YORK 16, N. Y.

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Inquiries as to our services solicited

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Only One Wool Oil Supplier Offers You All This!

1. SCIENTIFIC ANALYSIS . . .
A S/V engineer uses special instruments (like this moisture meter) to analyze mill operations.

2. ENGINEERING REPORT . . .
After analysis, S/V engineer prepares report, with recommendation of correct wool oil.

3. PROVED PRODUCTS . . .
Recommended from complete line, meeting all degrees of scourability and discoloration resistance.

4. LABORATORY SERVICE . . .
Technicians in S/V laboratories make tests of mill samples to control performance on the job.

5. PROGRESS REPORTS . . .
Show efficiency of fiber lubrication, make recommendations for still further improvement.

Why accept less for your mill?

There's no mystery about which wool oil is best for your operation when you call in Socony-Vacuum. Our fiber lubrication service and complete line of *S/V Woolrex Oils* assure your use of the right product—*on a price-performance basis!* Why not get all five benefits of this exclusive wool oil service?

SOCONY-VACUUM OIL COMPANY, INC.
Chemical Products Division, 26 Broadway, New York 4, N. Y.

Process Products
SOCONY VACUUM

Socony-Vacuum Process Products

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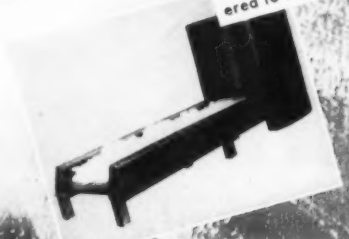
FASTER • STREAMLINED • EFFICIENT

A NEW DAY FOR THE COTTON AND SYNTHETIC INDUSTRIES

NEW BLENDING LINE FOR SYNTHETICS

New lattice opener breaks down the baled material without fiber damage. A battery of these openers enables different types of fibers to be delivered to the blending machine.



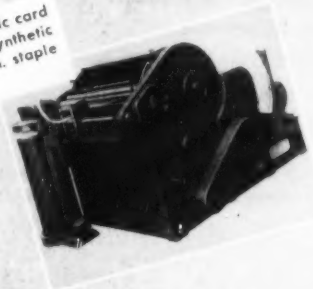
A WORLD OF NEW IDEAS
NEW DEVELOPMENTS
NEW PLATT MACHINERY

New blending machine is fed by four lattice openers and delivers the blend constituents in very accurate proportions for treatment by the intensive picker.

New intensive picker performs the final opening and blending and produces a uniform lap of undamaged fibers.

COMPLETE LINES of New Machinery from the WORLD'S LARGEST MAKER of Textile Machinery

New Platt single roller synthetic card for processing rayon and synthetic fibers from 1⅞ in. to 4½ in. staple length.



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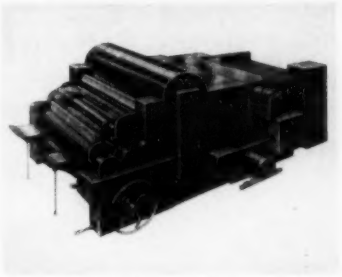
NEW **PLATT MACHINERY** ANNOUNCED at the International Textile Exhibition...

NEW LINE OF COTTON OPENING & PICKING ROOM MACHINERY

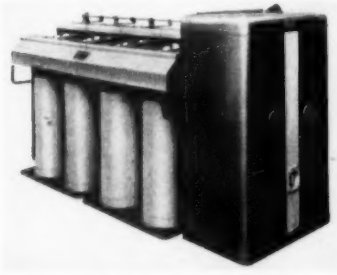
Blending hopper bale openers combine neat appearance with simple and accurate settings, fine control of production and efficiency.

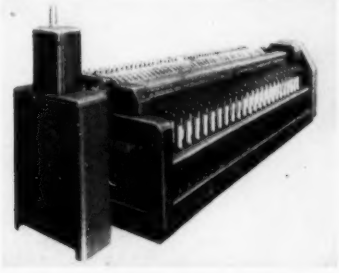
New Platt drawing frame with Shirley system of drafting gives a considerable reduction in short term sliver irregularities. All driving and gearing is at one end of machine.



Platt picker equipped with new patented feed system. Beater and cage section aerodynamically designed to increase yard by yard lap regularity, uniformity across the lap and good selvedges.

New Platt MS.2 roving frame with new Pneumastop, a simple, reliable, self-contained unit combining the Pneumafil system of broken end collection with an electronic stop motion.





AND MANY, MANY OTHER NEW MACHINES

PLATT BROS.

SALES LTD. OLDHAM, ENGLAND

a. h.

Atkinson, Haserick & Co.

TEXTILE MACHINERY AGENTS & ENGINEERS SINCE 1823

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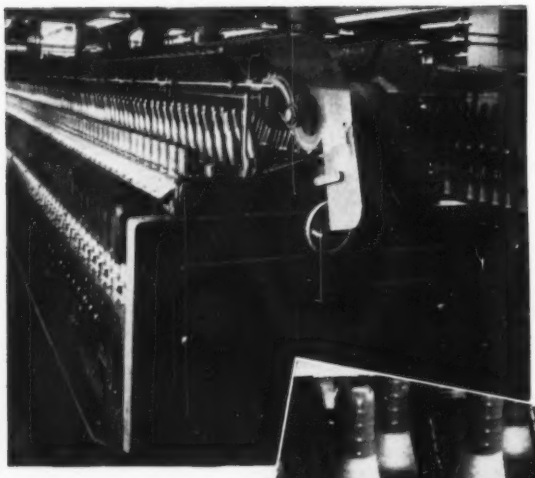
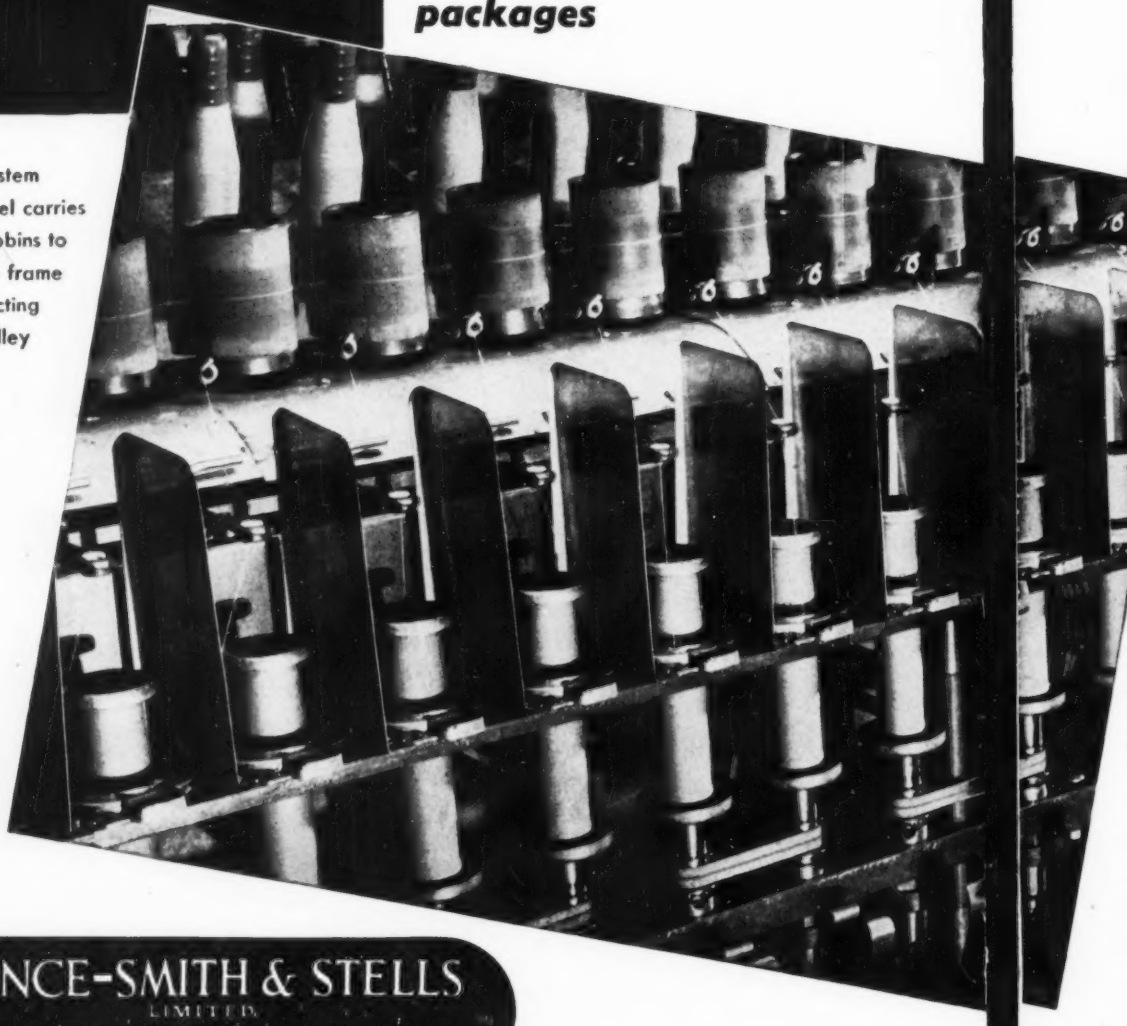
Twist Large Packages of



Prince-Smith & Stells improves 2-fold ring twister for all counts of worsted yarns on large packages

A conveyor system above the creel carries the empty bobbins to the end of the frame without obstructing the working alley with trucks.



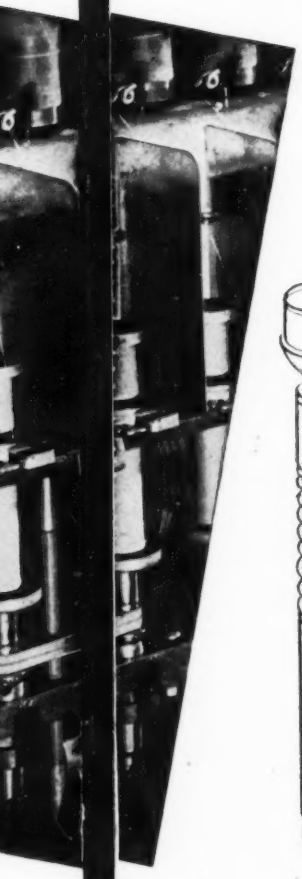
PRINCE-SMITH & STELLS
LIMITED
INCORPORATING TAYLOR WORDSWORTH & CO LTD
KEIGHLEY ENGLAND

U.S.A. Agents for French System Machinery: Blake Electric Mfg. Co., 43 Commercial Wharf, Boston 10, Mass.

For more information, write direct or use Reader Service post card.

All Counts

IF YOU do two-fold twisting of worsteds, you will find this a very practical machine. It will give you all the time-saving advantages of large packages, together with full twisting control for even fine counts. Increasing the size of the dolly rolls to a 3" diameter gives a more accurate tension control and consequently a better yarn. New type spindles eliminates vibration and increases speeds. They require lubrication at only 2,500 hour intervals thus reducing the hazard of oil in the yarn area. Ball bearing tension pulley assemblies save power and tape wear. An adjustable change speed device permits quick alteration of spindle speeds. Combination creel allows you to run from either bobbins or large cones interchangeably. A simplified, rail lifter motion (each side separate) affords accurate, easy alterations for fine or coarse counts. The entire machine is designed for years and years of low maintenance service. For further information please contact Atkinson, Haserick & Co.



ABSORBS VIBRATION

The new Hoffman roller bearing spindle insert has a spring and sleeve which absorbs vibration between the rail and the bolster. The free running spindle uses less power and reduces tape slippage. The knee brake mechanism lifts the complete spindle unit from its normal position causing the top flange of the wharle to make contact with a stationary brake shoe.

WE ARE INDEBTED TO THE CLEVELAND WORSTED MILLS CO. FOR THE PHOTOS

NOTICE

TO OWNERS OF

ATKINSON, HASERICK & CO.

MACHINERY

You can secure revised recommendations for aprons, bobbins, card clothing, fallers, rings, screws, etc. for all machinery you have purchased from Atkinson, Haserick & Co. May we suggest that Purchasing Agents review specifications of their mill supplies with one of our engineers. These engineers are continually working with your type of machinery. Their recommendations for even slight changes in parts or usage can often produce gratifying results.

Atkinson, Haserick & Co.

a.h.

Textile Machinery Agents and Engineers Since 1823

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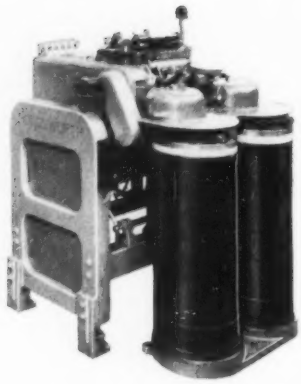
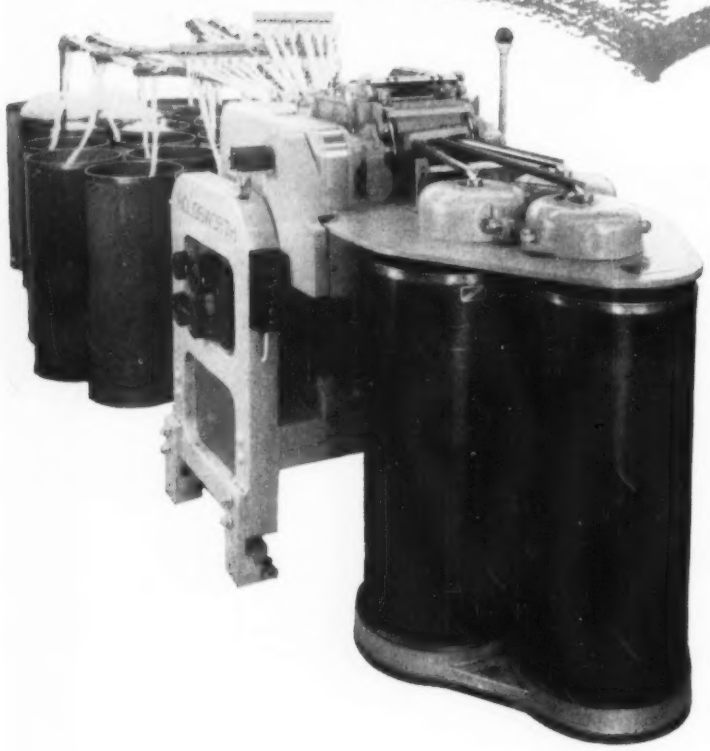


BREAKER

2 DELIVERY

Gill Reducing is a very efficient method of reducing costs and improving sliver quality for all types of worsted, blended and synthetic fibers. All the sliver produced by this Breaker will be handled by just **one** Intermediate Reducer.



INTERMEDIATE

3 DELIVERY

The Intermediate operation is no longer a bottleneck when you have this new three delivery Gill Reducer. Production flows directly through the set as each of the three Gill Reducers produce the same total sliver weights while **operating at the same drafts.** Only Holdsworth offers this logical arrangement. We will be pleased to send you full information.

FINISHER

4 DELIVERY

All the sliver produced by the Intermediate will be handled by this quad Finisher. Full utilization of fiber, manpower and floor space is achieved. ONLY HOLDSWORTH BUILDS ALL TYPES OF GILLING EQUIPMENT FOR THE WORSTED SYSTEMS. CALL ON US.

New

HOLDSWORTH 3 DELIVERY GILL REDUCER

OPENS BOTTLENECK in worsted drawing

BALANCES WEIGHTS AND DRAFTS FOR ENTIRE OPERATION

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GILL SCREW CO., INC.
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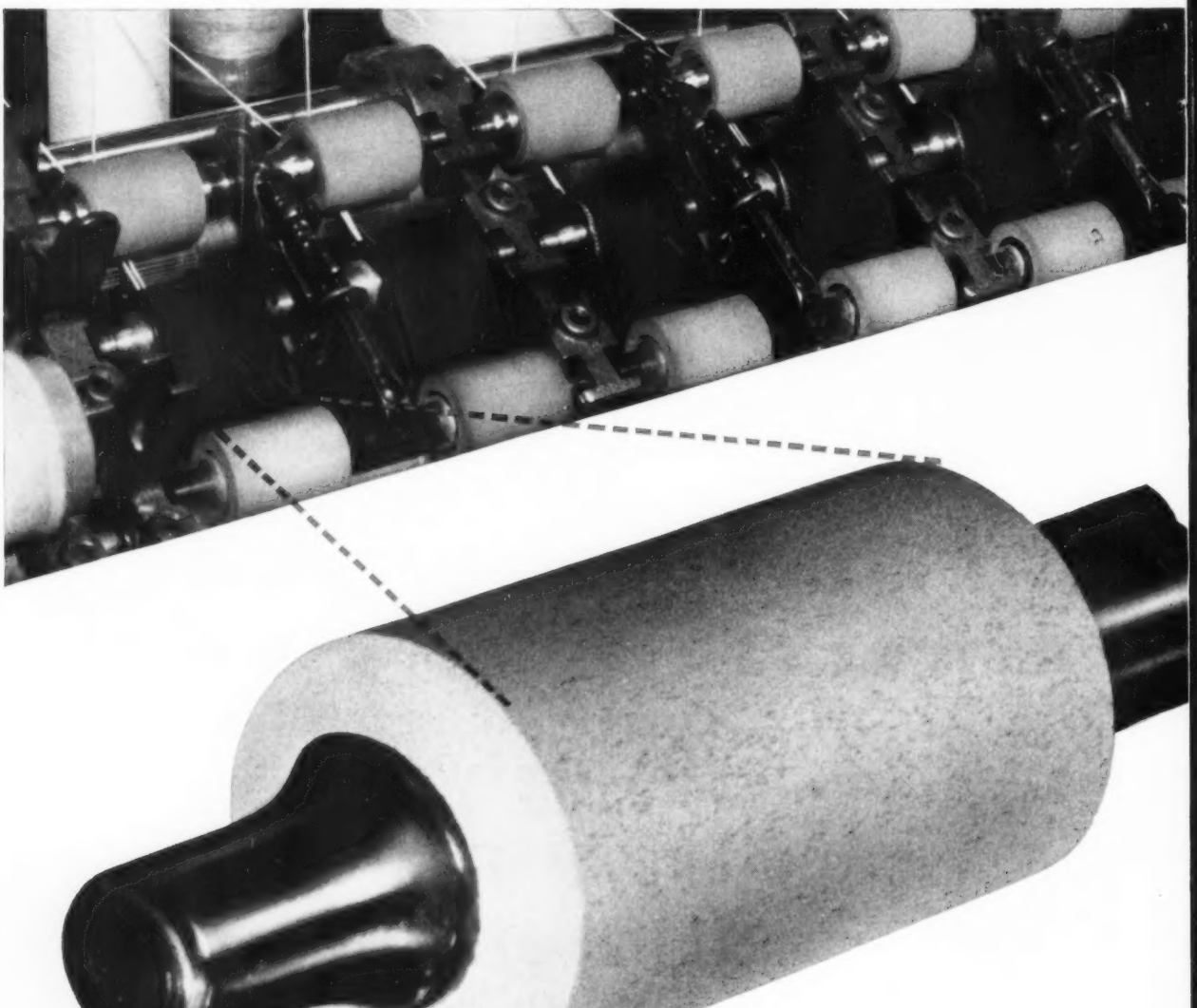
This cot's spinning surface



CLOSE-UP SHOWS HIGH-FRICTION SURFACE of NO-742-S cot. You can see for yourself that the drafting surface has the "bite" needed to carry loose fibers far back on the clearer, where they can't fall off and cause yarn irregularities or broken ends.

ARMSTRONG'S

has the "bite" you need to

STOP SERIOUS EYEBROWING

Even after months of spinning coarse yarn, Armstrong's newest Accotex Cot packs waste well back on the clearer.

The spinning surface of the NO-742-S cot on the opposite page is really unique. If you could run your fingers over the lap-resistant drafting face, you'd feel the tiny "teeth" that make this cot so effective in eliminating even the most serious eyebrowing.

The "bite" of this spinning surface carries waste fibers well back under the clearer board and packs them there. With normal picking schedules, you'll never have an eyebrow on frames equipped with NO-742-S cots.

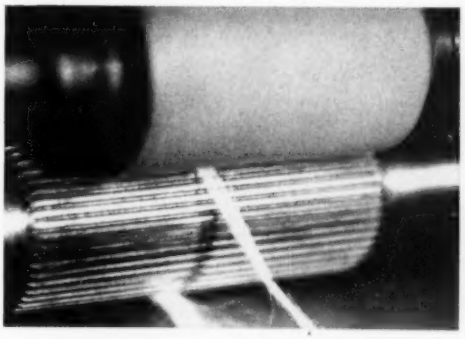
Needs only one buffing per year. The surface of the NO-742-S retains its high-friction "bite" for months. One mill supervisor spinning low-count yarn reports, "Your NO-742-S cots cleared up a bad eyebrowing situation in my spinning room. They run clean without slicking or glazing, too. As a matter of fact, I only have to rebuff them once a year."

A re-buffing schedule like this gives you excellent economy. It gives you longer cot life as well as savings in time and labor.

Mill-tested for 2 years. This newest Armstrong cot was tested in mills for over 2 years . . . tested on all kinds of spinning equipment, and on as many different types and counts of yarn as possible.

Mill after mill reported the same result—months of clean operation without eyebrowing.

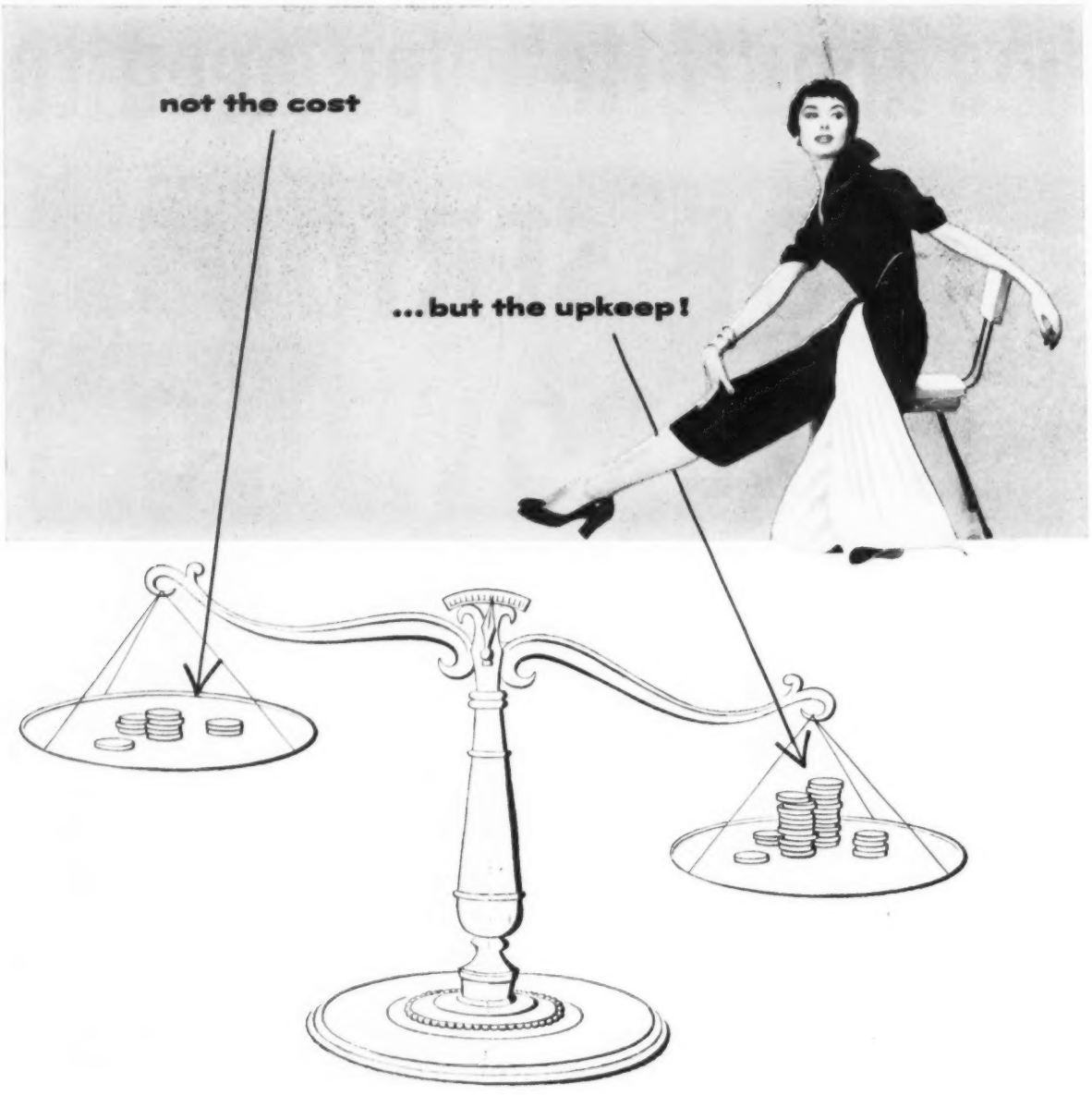
If you have trouble with eyebrowing, test the NO-742-S in your spinning room. Ask your Armstrong man for samples or write Armstrong Cork Company, Textile Products Department, 6511 Dauphin St., Lancaster, Pennsylvania. Available for export.



WITH REVOLVING CLEARERS, USE THE LAP-RESISTANT J-490 COT

For spinning fine yarn, and for any count yarn with revolving clearers, Armstrong's J-490 Accotex® Cots have proved ideal in thousands of mills. Special electrolytes added to the J-490's long-wearing synthetic rubber composition make it highly resistant to lapping. The J-490 runs exceptionally clean, too—it's not affected by oil, dyes, or commonly used textile solvents. If lapping's a problem, call your Armstrong man today and arrange for a test side of these lap-resistant J-490 Accotex Cots.

ACCOTEX COTS — NO-742-S • J-490 • NC-727



This old complaint is fast becoming a thing of the past. Now, fashions made with Du Pont's modern-living fibers offer beauty *plus* practicality. Now, customers may have smart styles that stay fresh-looking, wear longer and require *less upkeep* . . . in time, money and effort.

Easier, low-cost care is just *one* of the many advantages you can build into the fabrics you create with Du Pont's modern-living fibers. You can use them, too, to offer unique textures, rich colors, pleat and shape retention, feather-weight warmth . . . and the many other practical plusses that fit the way Americans live today

Count on Du Pont's leadership to help you keep pace with the newest advances in fiber research. Use Du Pont's modern-living fibers to create fabrics for today's customers, and tomorrow's . . . fabrics that satisfy, fabrics that sell.

DU PONT'S MODERN-LIVING FIBERS

NYLON) RAYON) ACETATE) ORLON® ACRYLIC FIBER) DACRON® POLYESTER FIBER)

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BETTER THINGS FOR BETTER LIVING...*THROUGH CHEMISTRY*

For more information, write direct or use Reader Service post card.

Keep them spinning clean and free

with Gulfspin

Gulfspin works three ways to keep spindles clean. First, it's oxidation stabilized to resist sludge formation. Second, Gulfspin prevents contaminants from depositing on spindle parts. Third, Gulfspin provides effective protection against rust, especially important in cast-iron bolsters where rusting causes bolster wear.

Because deposits are not a problem with Gulfspin, spindle vibration is kept to a minimum and dampening devices function normally.

And you reduce power costs with Gulfspin! Ordinary spindle oils often thicken after a few months of service, resulting in about one watt per spindle increase in power consumption. Not so with Gulfspin! This outstanding oil shows no increase in viscosity after many months of service.

Won't you give us a chance to prove the advantages of Gulfspin on at least one of your frames. Write, wire, or phone your nearest Gulf office and ask a Gulf Sales Engineer to call.

GULF INDUSTRIAL LUBRICATION

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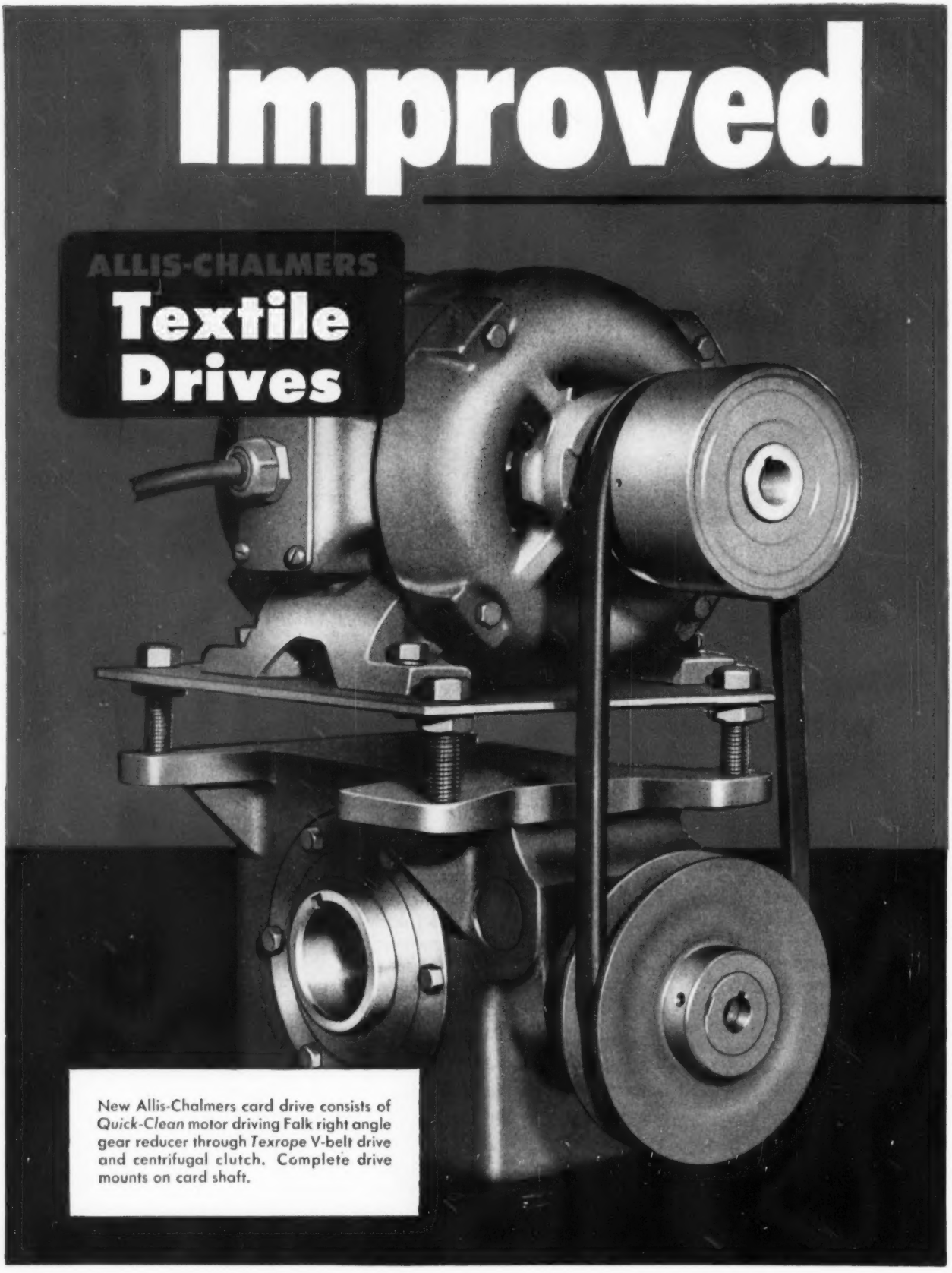
Improved

ALLIS-CHALMERS

Textile Drives



New Allis-Chalmers card drive consists of *Quick-Clean* motor driving Falk right angle gear reducer through *Texrope* V-belt drive and centrifugal clutch. Complete drive mounts on card shaft.

CARD DRIVE

NOW...more power at the shaft...more protection against lint. Outstanding performance of original unit improved by more efficient gear reducer and *Quick-Clean* motor.

ARE YOU STILL USING OVERHEAD BELT DRIVES on your cards for lack of a good card drive that can be installed at a reasonable price? Well, here is the card drive you have been looking for. The savings in lower maintenance costs, more production and higher quality goods will soon more than pay for the new drive. Think how much neater, lighter and more efficient your plant will be, too, without that forest of shafting and belting hanging from the ceiling. Check these features:

Compact — Requires practically the same floor space as an overhead belt drive. Drive is mounted directly on card shaft with torque arm to keep it in position. No strain on card arch to cause vibration or distortion.

Reduces Maintenance Costs — No heavy, expensive belts to wear out. No periodic belt dressing. The drive is practically vibrationless, which increases life of all parts and makes machine easier to keep in adjustment.

Cleaner Operation — No sticky belt dressing to catch dirt. Won't throw oil and dirt into material to cause low quality goods or rejects.

Uniform Speed — Drive unit locked tightly to shaft. Constant speed improves quality.

Safe — Small *Texrope* drive easily guarded.

Easy to Install — You don't have to move your cards to install this drive. It will fit in the same space as your present drive. And it's easy to install. Simply fit the gear reducer on the shaft and attach a torque arm to keep it in position.

Ask the Allis-Chalmers representative to show you what new card drives will do for your mill. Or write Allis-Chalmers, Milwaukee 1, Wis., and ask for Bulletin 51B7867.

A-4134

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COMPLETE SERVICE — from power line to machine

ALLIS-CHALMERS

Originator of the Multiple V-Belt Drive for the Textile Industry

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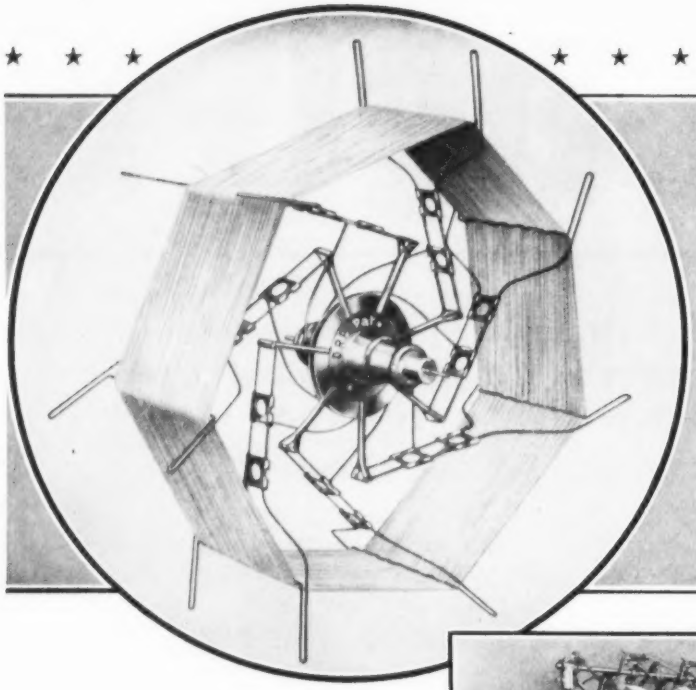


As every knitter knows —

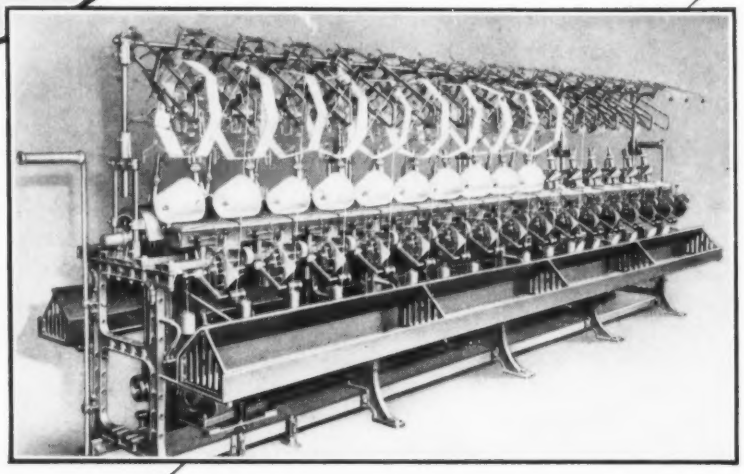
A Knotless Yarn is a Premium Yarn

The exclusive, fully adjustable skein shown at left is an integral part of the famous Schweiter VARIO-CONER, Type KM — a machine which winds the most delicate yarns without stretch, breakage or waste.

Adjustable from 35" to 72".

Wind your Knitting Cones on the specially designed silent

SCHWEITER VARIO-CONER type KM



Operators of knitting mills will find the KM Winder a very sound investment. Write today for detailed information and prices.

No other winder made today can rival this machine for efficiency, economy of operation and the volume production of perfect cones. Its exclusive patented gear-driven waxing mechanism and automatic stop motion prevent stretched yarn and eliminate yarn breakage. These and many additional special features combine to make this the world's finest, most economical Knitting Cone Winder!

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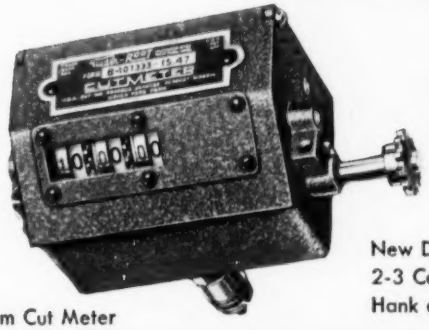
It's Clean-up Time

...RIGHT NOW!

That's right! Time to check up on the counters all through your mill . . . and figure out what you need in the way of *new* Veeder-Root Counters . . . as well as additional shift-units for present counters . . . and general servicing and repair. Look over your counting equipment with a modernizing eye. Then let us know what you need. And those counters that need service . . . send them in to us *now*.

Double-wheel Counter



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New Design of
2-3 Convertible Pick,
Hank and Knitting Counters

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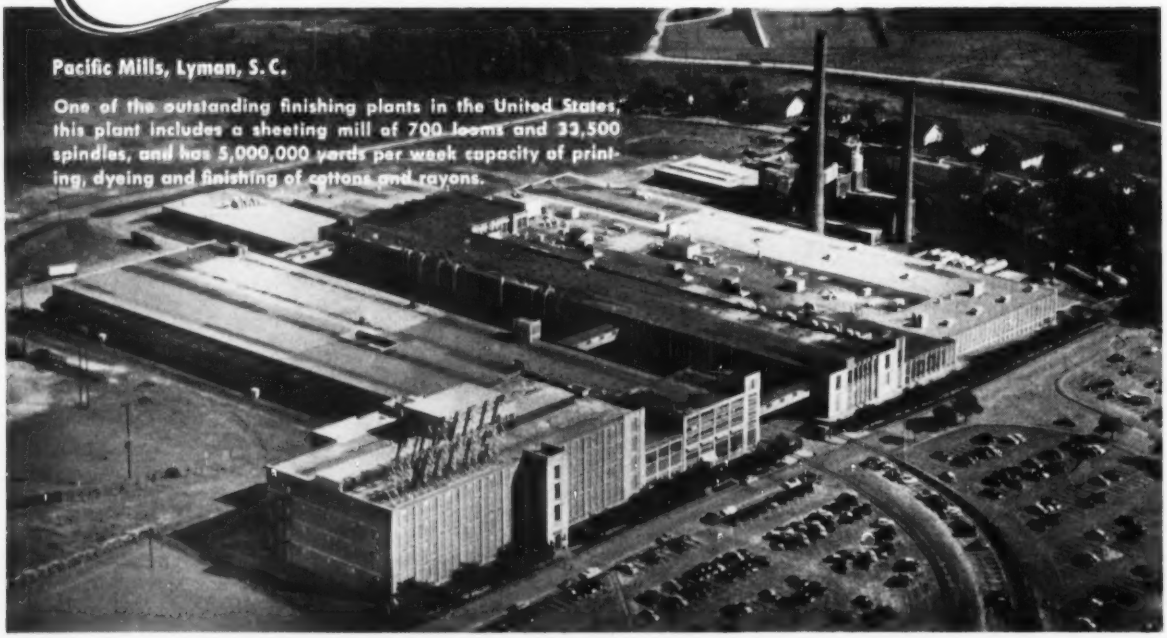

Pacific Mills, Lyman, S. C.

One of the outstanding finishing plants in the United States, this plant includes a sheeting mill of 700 looms and 33,500 spindles, and has 5,000,000 yards per week capacity of printing, dyeing and finishing of cottons and rayons.

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At GDC our job is more than the delivery of fine dyestuffs. The solution of your printing problems is our primary aim. To help you, we have specialists with years of practical mill experience in machine printing, screen printing, spray printing and block printing. Write, phone or wire. Our staff is ready to respond immediately to help you get the best textile printing results.
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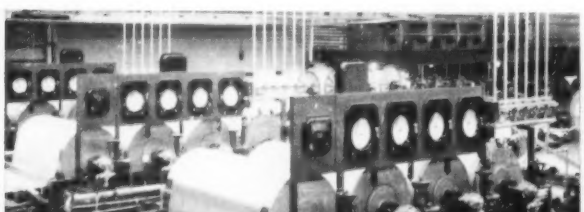
JUST OUT

NEW BULLETIN 98229

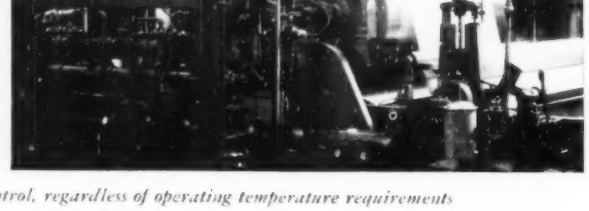
shows how Taylor "Cost Cutters" can work for you!

COMPLETE information on **Size Cooking Control Systems** to provide more uniformly sized yarn; save starch, steam and time; eliminate waste; prevent over or under-cooking . . . **Storage Kettle Control Systems** to prevent excessive boiling in size box; maintain more uniform size . . . **Cylinder Control Systems for High Speed Slashers** to control moisture content in yarn . . . **Size Box Level Control Systems** to maintain critical levels . . . **Size Box Squeeze Roll Control Systems** to prevent soft spots, give uniform penetration of size. Write Taylor Instrument Companies, Rochester, N. Y., or Toronto, Canada.



Modern High Speed Slashers under accurate Taylor control, regardless of operating temperature requirements

High Speed Rayon Slasher with Taylor Squeeze Roll Pressure controls



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ROSEBURG Ridenour Electric Company
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PHILADELPHIA Atlantic Elec. Motors Co.
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PITTSBURGH Electric Mfg. & Repair Co.
POTTSTOWN Mellon Engr. Co.
READING Standard Elec. Service Corp.
WILLIAMSPORT G. I. Electric Company

RHODE ISLAND
PAWTUCKET New England Machine & Electric Company
PROVIDENCE Walco Elec. Products Co.

SOUTH CAROLINA
GREENVILLE Southern Elec. Service Co.
SPARTANBURG Southern Elec. Service Co.

TENNESSEE
KNOXVILLE Tennessee Armature & Electric Company
MEMPHIS Frank Stevens Electric Co.
NASHVILLE Electrical Machinery & Supply Co.

TEXAS
BEAUMONT Elec. Machinery & Repair Co.
CISCO Dalton Electric Company
CORPUS CHRISTI Bradleys' Motor & Armature Works
FORT WORTH Warriner Electric Shop
HOUSTON Roy A. Berentz Company, Inc.
HOUSTON Texas Armature Works
LUBBOCK Lubbock Electric Company
LUFKIN Elec. Machinery & Repair Co.
McALLEN McAllen Armature Works
SAN ANTONIO Electric Motor Service & Sales Co.

UTAH
SALT LAKE CITY Schraga Electric Co.

VERMONT
BARRE Cushman Electric Co.

VIRGINIA
NORFOLK Virginia-Carolina Electrical Works, Inc.
RICHMOND Elec. Motor & Repair Co.
ROANOKE Lloyd Electric Company
STAUNTON Johnson Electric Company

WASHINGTON
ABERDEEN Industrial Elec. Service Co.
EPHRATA Gardner Electric
LONGVIEW Longview Electric
MOUNT VERNON Mount Vernon Electric Motor Service
OKANOGAN H. H. Hall Motor Shop
SEATTLE Seattle Electric Works
SPOKANE Tinling & Powell
WALLA WALLA Berry Electric Company
WENATCHEE Pacific Electric Service
YAKIMA Cooper Elec. Motor Service Co.

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CHARLESTON Charleston Elec. Sup. Co.
CLARKSBURG Barnes & Brass Electric Co.
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STERLING ELECTRIC MOTORS

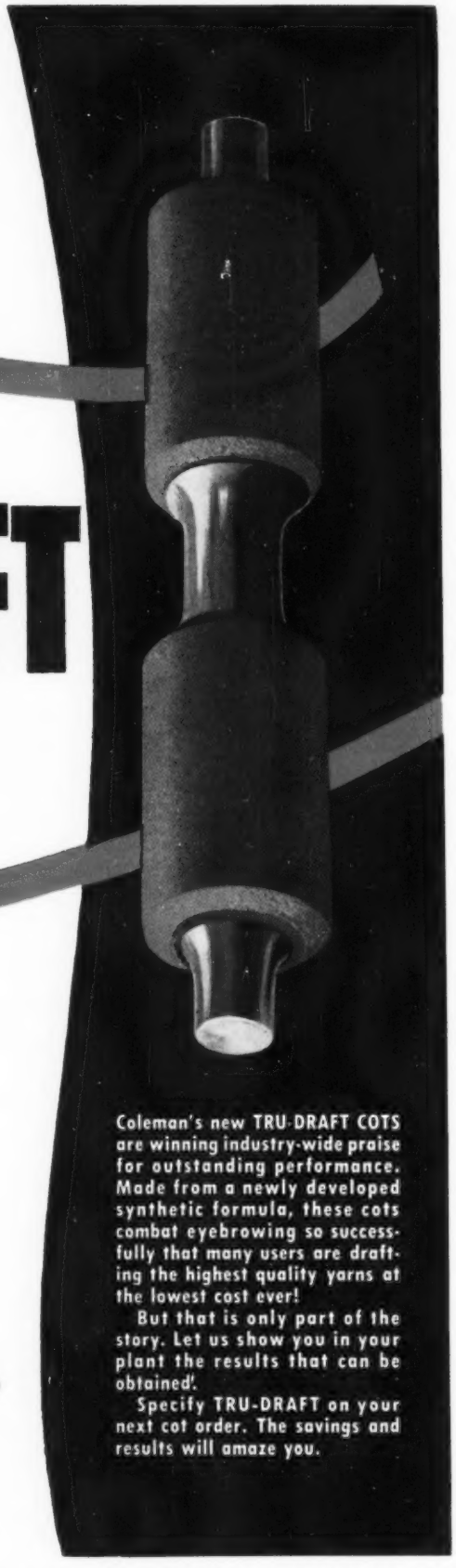
Plants: New York City 51 • Los Angeles 22 • Hamilton, Ontario, Canada • Santiago, Chile

Offices and distributors in all principal cities

announcing the new synthetic

Coleman

TRU-DRAFT COTS



A Specially Formulated Elastomer that:

- ✓ *virtually eliminates eyebrowing*
- ✓ *drafts superior yarn*
- ✓ *gives longer service between buffings*

Coleman's new TRU-DRAFT COTS are winning industry-wide praise for outstanding performance. Made from a newly developed synthetic formula, these cots combat eyebrowing so successfully that many users are drafting the highest quality yarns at the lowest cost ever!

But that is only part of the story. Let us show you in your plant the results that can be obtained.

Specify TRU-DRAFT on your next cot order. The savings and results will amaze you.

TRU-DRAFT COTS are manufactured by B. F. Goodrich Co. exclusively for

COLEMAN COMPANY, INC.

GREENVILLE, SOUTH CAROLINA

Represented by:

Bill Boger, Charlotte, N. C. Tel. 4-5563

Ed White, Greensboro, N. C. Tel. 4-7218

For more information, write direct or use Reader Service post card.

THE TRADE CALLED FOR:

Shrinkage control and crease resistance on a viscose-Orlon striped weave...*

The finisher delivered a perfect job, thanks to Sandoz Technical Service

Problem:

Finishes normally used to produce dimensional stability and crease resistance require high curing temperatures which tend to turn the new thermoplastic fibers yellow, hard, or brittle.

Solution:

Sandoz' new urea formaldehyde resin, FINISH EN, made it possible to work out the perfect formula for this fabric. The low temperature curing properties of FINISH EN enabled the finisher to cure the goods at 240-260° F. In this manner the white Orlon section of the fabric was preserved and, by combining CUPROFIX and FINISH EN, the dyed rayon possessed excellent color permanency. The fabric showed satisfactory shrinkage control and crease resistance and the hand was very attractive.

FINISH EN, in addition to viscose-Orlon blends, also offers great advantages for blends consisting of viscose and either Dacron* or Dynel, Acrilan® or any other combinations of these newer man-made fibers.

• • •

If you are faced with any problem involving these or other fabrics, Sandoz Technical Service may be able to help you solve it. Call your nearest Sandoz branch in Hudson, Mass.; Fairlawn, N. J.; Philadelphia; Charlotte; Cincinnati; Los Angeles; Montreal or Toronto. Or write to Sandoz Chemical Works, Inc., 61 Van Dam Street, New York 13, N.Y.

*Du Pont Trademark

SANDOZ

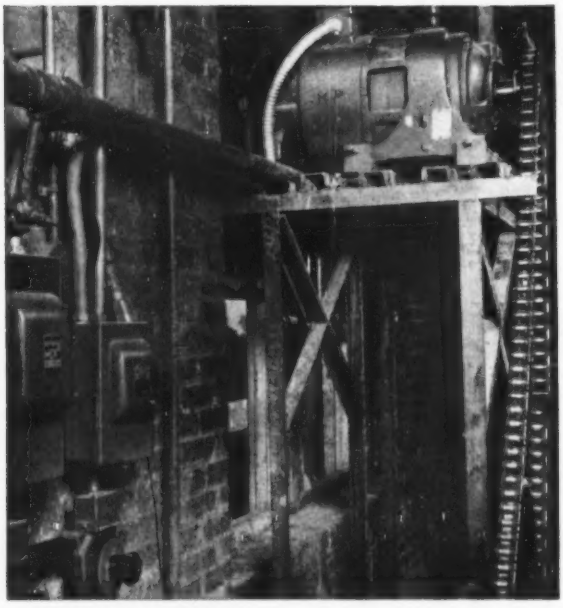
SANDOZ

THINKS AHEAD WITH TEXTILES

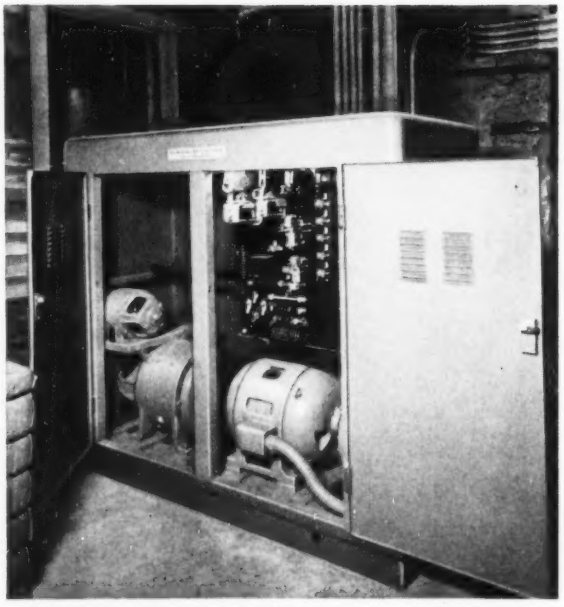
ENGINEERING REPORTS:

MAN-HOURS REDUCED—One operator co-ordinates over-all speed of No. 1 finishing range simply by turning speed-control rheostat. For closer adjustment of the speed and tension between Tommy Dodd, No. 2 dry cans, and padder, a rheostat is provided for each motor. Resulting accuracy means that range operation will be simple, speedy, and economical.

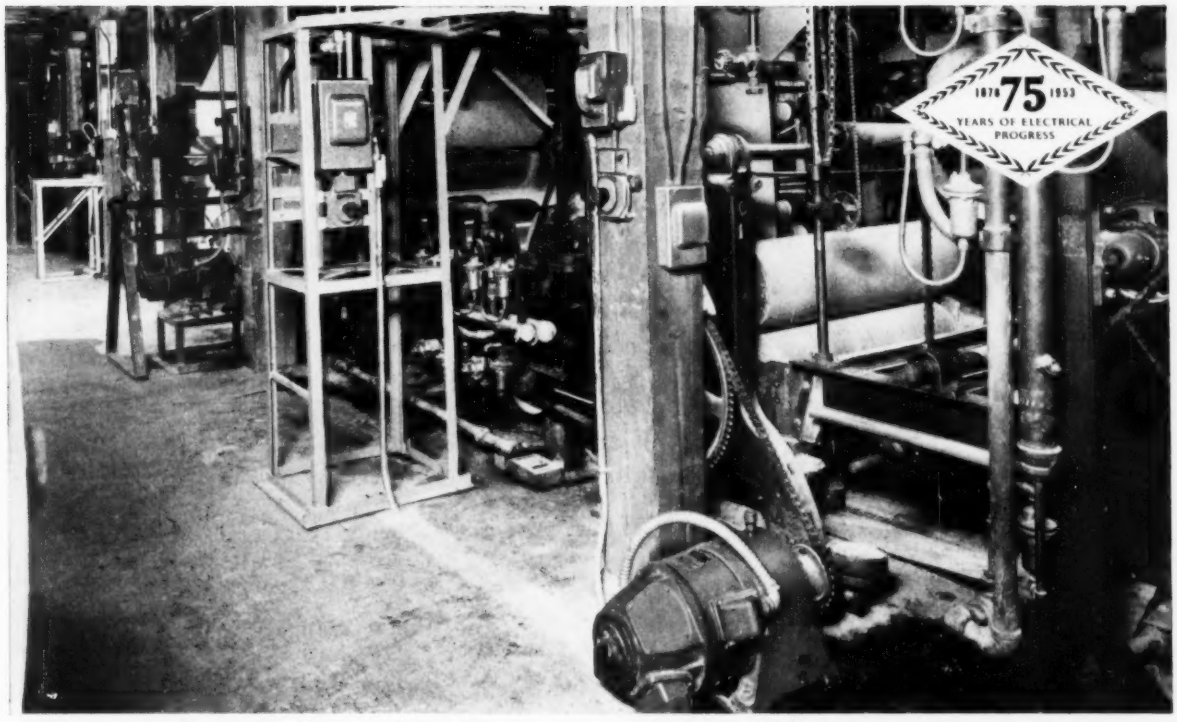
"G-E packaged range drives take



CLOSE TENSION CONTROL is provided by this powerful G-E gear-motor which drives the Tommy Dodd for the No. 2 finishing range. Finer quality dyeing is thus made possible.



PRODUCTION AREA SPACE SAVED—Compact design of 50-hp G-E packaged power unit made locating it away from the work area easy. Unit is delivered ready to operate.



COMPACT, UNIFIED LAYOUT of the remainder of the No. 1 finishing range is shown here. By installing a G-E packaged drive, the production area could be planned more efficiently, and working conditions improved. Compensating gate rheostats throughout the range automatically keep fabric tension, speed more accurate, respond quickly for smooth co-ordination.

the guesswork out of finishing"

"They're our best modernization expenditure," adds A. J. Leaderman, President of Rockland Bleach and Dye Works

"Our experience with our two new General Electric packaged range drives has been gratifying . . . they have taken the guesswork out of range work," reports A. J. Leaderman, President of the Rockland Bleach and Dye Works in Baltimore. "We feel that they have been our best expenditure out of more than a half-million dollars we have spent on modernization." Here's why:

Installation costs were low

All of the G-E equipment in the adjustable-voltage d-c drive systems were supplied in easy-to-handle "packages." These units were standardized—mass-produced—to lower costs and simplify installation. All were factory-wired and tested, delivered ready for operation. The flexibility of this equipment permits Rockland Bleach & Dye to make plant-layout changes easily and quickly.

Operations prove highly efficient

Any desired operating or jogging speed within a wide speed range can be set on the two new G-E packaged drives. Over-all speeds are easily controlled from a central station. Compensating gates provide close co-ordination of all motors. The drives accelerate and decelerate smoothly and quickly. Finishing operations are more flexible—individual units can be disconnected from either range.

G-E application engineers co-operated closely with Rockland engineers to unify these two drive systems. If you plan to install a new range, or extend or modernize an existing one, they can help you the same way. Ask your local G-E Apparatus Sales Office about it. General Electric Company, Schenectady 5, N. Y.

654-30

Engineered Electrical Systems for Textile Mills

GENERAL ELECTRIC

 For more information, write direct or use Reader Service post card.

WHITIN-CLIMAX*
and
WHITIN-CLEANDRAFT**
TOP ROLLS

... pay for themselves *Quickly!*

The savings that you will make when you install Whitin-Climax Ball Bearing Top Rolls on the front line and Whitin-Cleandraft Non-lubricated Top Rolls on middle and back lines will enable you to recover your entire investment in a remarkably short time.

This combination virtually eliminates the need for top roll lubrication — practically banishes oil-stained yarn. It reduces picking and cleaning costs to levels never before possible with solid rolls . . . improves yarn quality . . . cuts maintenance costs to a new low.

Some idea of the savings to be made in your mill by installing these rolls — the speed with which you can expect the return of your entire top roll investment — can be seen by examining the chart below. (The figures are from actual mill cost analyses from satisfied users).

	Total Number of Spindles	Yarn Count	Investment for Whitin-Climax and Whitin Cleandraft Rolls	Annual Savings* (Picking, Cleaning, Oiling, Buffing)	Investment Returned (Years)
MILL A	12,592	21's	$28,967.76	$10,859.58	2.6
MILL B	20,192	36's	57,016.40	14,712.27	3.9
MILL C	8,160	50's	20,070.24	7,492.72	2.8
MILL D	10,032	12's	26,233.68	9,407.48	2.8

Disregarding additional tax savings

**Manufactured by* MACHINECRAFT, INC. WHITMAN, MASS.

***Manufactured by* INDUSTRIAL PLASTICS, INC. WHITMAN, MASS.

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. · ATLANTA, GA. · SPARTANBURG, S. C. · DEXTER, ME.

For more information, write direct or use Reader Service post card.

CONTINUOUS OPERATION at any speed

RELIANCE V★S DRIVE ®

with

the new

Totally-Enclosed Dual-Cooled

PATENT APPLIED FOR

motor

For continuous operation over extremely wide speed ranges . . . or wherever unusually severe operating conditions must be met . . . the new Reliance Totally-Enclosed Dual-Cooled Motor extends the application range of the V★S Drive. Wherever high ambient temperatures, intermittent operation, prolonged low-speed operation, or severe duty cycles pose difficult cooling problems, Reliance V★S Drive with Dual-Cooled Motors have proved to be the best answer. The new Dual-Cooled Motor is available either totally-enclosed or explosion-proof, conforming to Bureau of Mines and Underwriters' specifications, in ratings from 15 through 150 hp. D-1464-C

Now thru 200 hp.

Your request for Bulletin C-2201 will bring you this new booklet featuring large cutaway drawing with 3-color transparent overlay showing operation of Reliance Dual-Cooled Motor, together with fact-filled bulletin showing production increases and operating economies obtainable with Reliance V★S Drive.

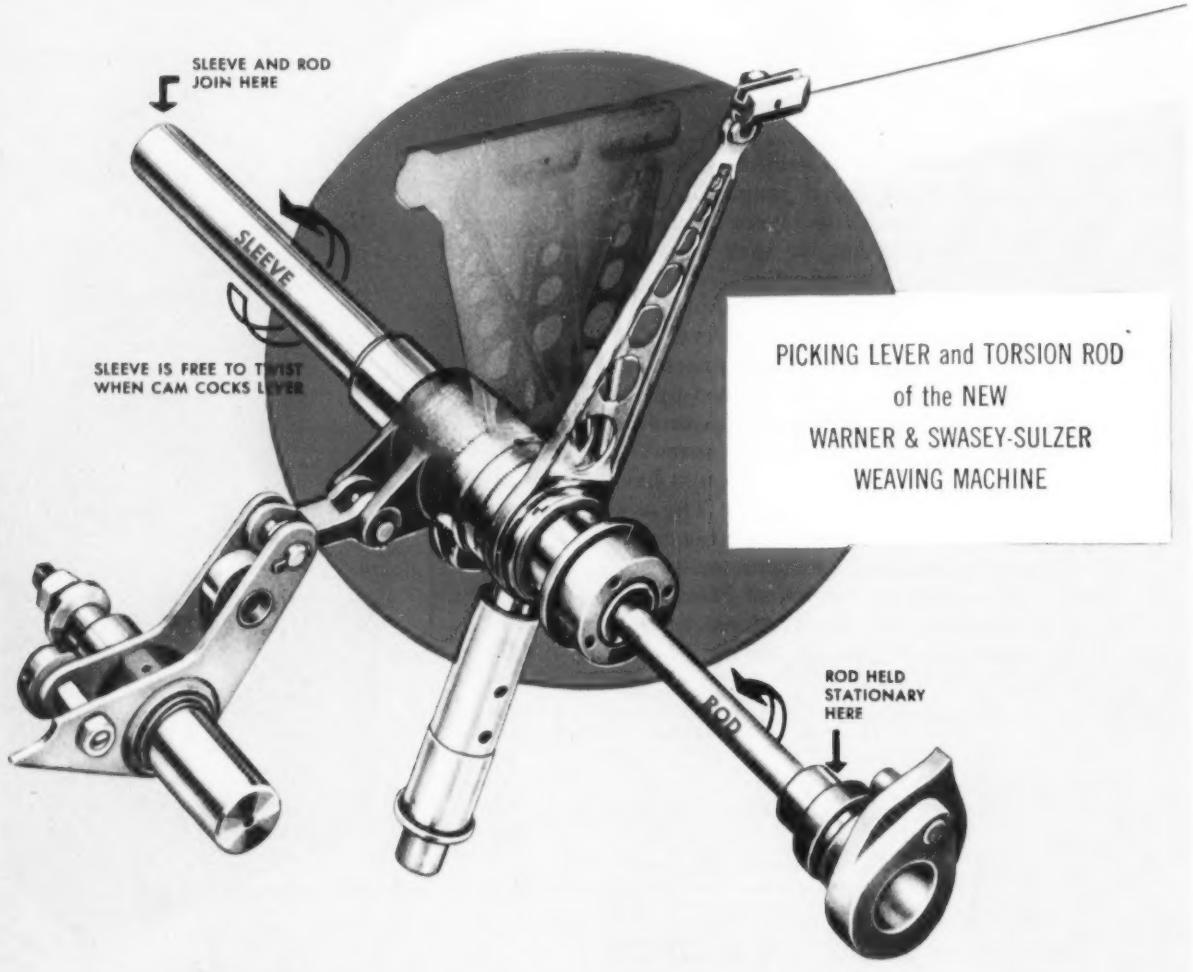
RELIANCE ELECTRIC AND ENGINEERING CO.

1086 Ivanhoe Road, Cleveland 10, Ohio • *Sales Representatives in Principal Cities*

"Mainspring" that keeps

Here is the "mainspring" behind the faster rhythm heard in many modern weaving rooms today—in the production-minded mills using new Warner & Swasey-Sulzer Weaving Machines. It's the revolutionary new picking lever and torsion rod that propels up to 240 shuttles per minute across the machine—speeding the production of fine fabrics, cutting costs, building profits.

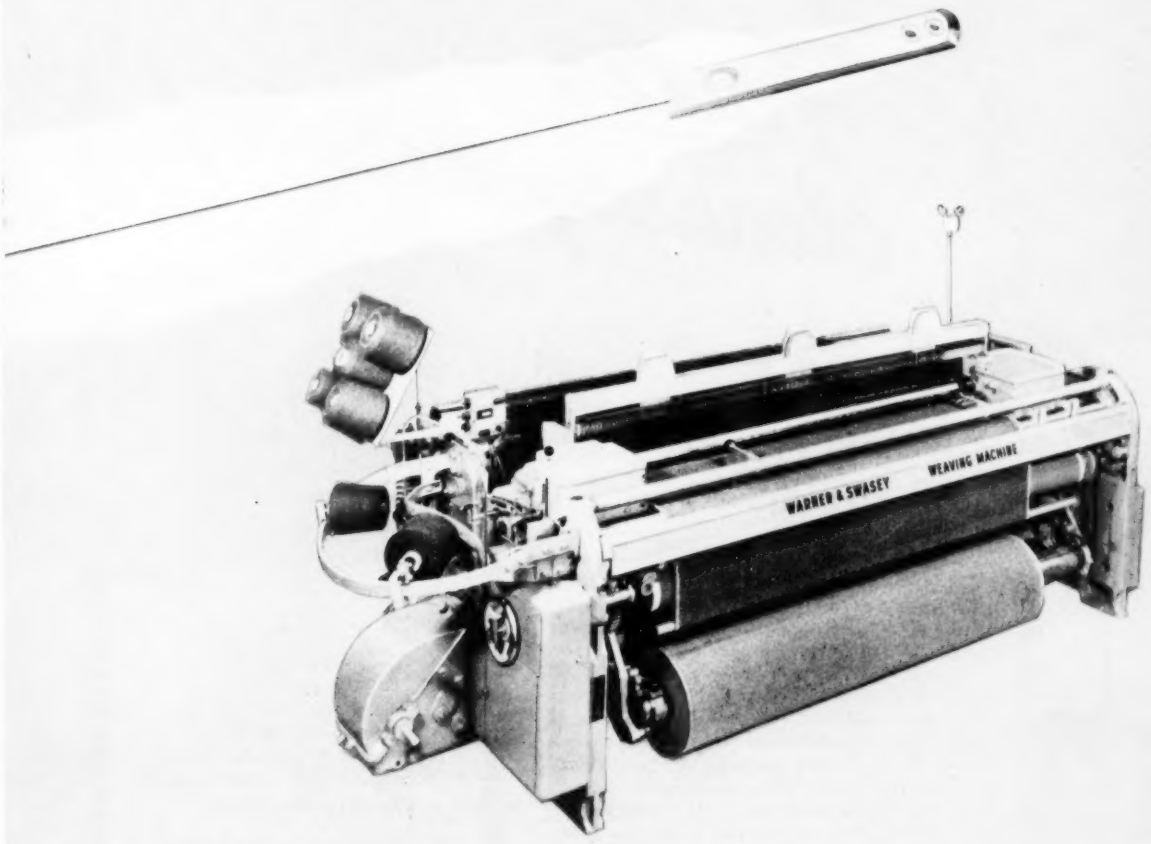
It will pay you to investigate the many operational advantages and cost-cutting features of these new machines. Call in your nearest Warner & Swasey Field Representative for all the facts.



PICKING LEVER and TORSION ROD of the NEW WARNER & SWASEY-SULZER WEAVING MACHINE

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS WITH WARNER &

weaving profits mounting!



Small steel shuttles are driven at high speed through the shed by this short picking lever. Energy is built up in the lever by twisting the torsion rod through cam action in the picking box, and locking it in its loaded position. Four times a second, a shuttle is placed in firing position and the driving force released—shooting the shuttle across the machine. Driving force is easily adjusted for varying widths of cloth and weight of filling. These parts, like all vital moving parts of this precision machine, are made of high strength alloy steels, making higher operating speeds possible.

WARNER & SWASEY
Cleveland
PRECISION MACHINERY SINCE 1880
TEXTILE MACHINERY DIVISION

SALES OFFICES

Main Office and Factory: **5701 Carnegie Ave., Cleveland 3, Ohio**
61 Rivulet St., North Uxbridge, Mass. 6910 Market St., Philadelphia, Pa.
Candler Building, Atlanta, Ga. 1820 Browning Ave., Charlotte, N. C.

SWASEY MACHINE TOOLS, TEXTILE MACHINERY, CONSTRUCTION MACHINERY

 For more information, write direct or use Reader Service post card.

Setol Cleanser HAS WHAT IT TAKES
TO MACHINE-SCRUB OILY FLOORS—

Faster cleaning action!

Cuts operating time of the scrubbing machine

Because *Setol* is specially compounded for the greater speed of *combination-machine-scrubbing*, it must *and does* work faster than average alkaline cleansers. *Setol* saponifies *and emulsifies* grimy oil and grease *instantaneously*. The wetting agent in *Setol floats the oil* for fast, easy, *and thorough* removal by the vac of a *combination machine* or with a separate vac unit. And because *Setol* stays fast-acting longer—does not spend its strength quickly as do ordinary oil and grease solvents—less is required to clean a given area. Thus *Setol* saves on materials and, by speeding the cleaning process, cuts operating time of the scrubbing machine . . . reduces labor costs . . . and saves on brushes. Best of all, *Setol gets floors oil-free clean!* Also acts as a disinfectant (contains pine oil), and leaves a pleasant, clean aroma.

- **A constant, fast-acting cleanser for machine-scrubbing cement, wood, wood block, metal, stone, and terrazzo floors**
- **Consistent use on cement floors prevents cement dusting . . . provides a finish that helps seal out waste materials**

Finnell 213P Scrubber-Vac

Applies cleanser, scrubs, and picks up—in ONE operation!

For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 1911A East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.
Originators of Power Scrubbing and Polishing Machines

50th Anniversary — Everything for Floor Care — FINNELL

BRANCHES IN ALL PRINCIPAL CITIES

JENKINS PRACTICAL PIPING LAYOUTS 68

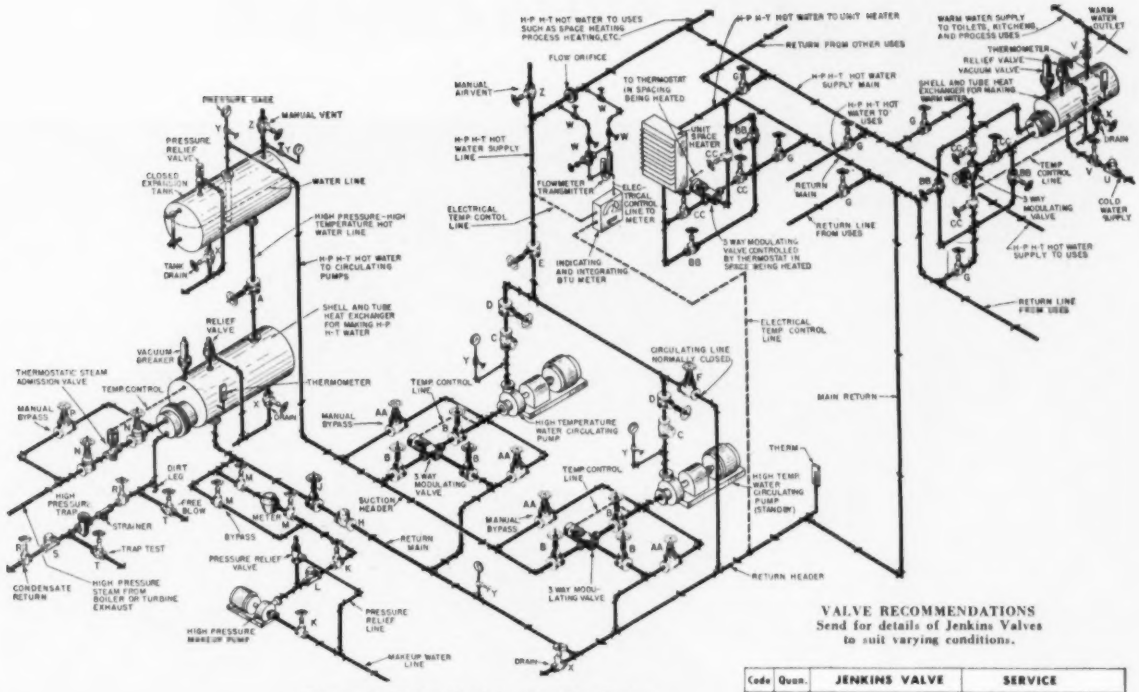


Diagram by Huxley Madeheim, Consulting Engineer
COPYRIGHT, 1953 — JENKINS BROS.

How to plan a HIGH PRESSURE-HIGH TEMPERATURE HOT WATER PIPING SYSTEM

For efficient space and water heating — and for numerous processing needs as well — a high pressure-high temperature system offers several distinct advantages over a steam system.

Often operated at pressures up to 215 psi, with a corresponding temperature of 388°F, a HP-HT system of this type eliminates the need for pitch, drainage, or traps and provides a greater amount of heat transmission for a given pipe size. Moreover, it requires no feed-water treatment and, when used for processing services, eliminates large pressure drops due to sudden load conditions.

The hot water is generated in a shell and tube heat exchanger by means of high pressure steam from either turbine extraction or exhaust. Unit heaters on the HP-HT lines provide for space heating requirements and a shell and tube heat exchanger supplies warm water for lavatories, kitchens, and processing which requires moderate temperatures. When used with accumulators, this system eliminates the need for taking additional steam directly from the steam generating source and, thus, provides a better plant heat balance.

Consultation with accredited piping engineers and contractors is recommended when planning any major piping installation.

To save time, to simplify planning, to get all the advantages of Jenkins specialized valve engineering experience, select all the valves you need from the complete Jenkins line. It's your best assurance of *lowest cost in the long run.* Jenkins Bros., 100 Park Ave., New York 17.

Complete description and enlarged diagram of this layout free on request. Includes additional detailed information. Simply ask for Piping Layout No. 68.

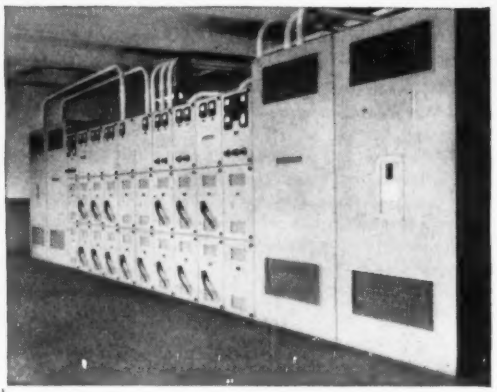
VALVE RECOMMENDATIONS
Send for details of Jenkins Valves to suit varying conditions.

Code	Quan.	JENKINS VALVE	SERVICE
A	1	Fig. 204 IBBM Gate	HP-HT Hot Water Shutoff
B	6	Fig. 204 IBBM Gate	3 Way Valve Shutoff
C	2	Fig. 339-R IBBM Swing Check	Prevent Backflow
D	2	Fig. 204 IBBM Gate	Pump Discharge Shutoff
E	1	Fig. 204 IBBM Gate	Supply Line Shutoff
F	1	Fig. 923 IBBM Globe	Circulating Line Shutoff
G	6	Fig. 280 Bronze Gate	Branch Shutoffs
H	1	Fig. 339-R IBBM Swing Check	Prevent Backflow
J	1	Fig. 204 IBBM Gate	Return Main Shutoff
K	2	Fig. 280-U Bronze Gate	Makeup Pump Shutoff
L	1	Fig. 962 Bronze Swing Check	Prevent Backflow
M	3	Fig. 280 Bronze Gate	Makeup Meter Shutoff
N	2	Fig. 1010 Cast Steel Gate	Thermostatic Valve Shutoff
P	1	Fig. 1042 Cast Steel Globe	ThermostaticValveBypass
R	2	Fig. 280-UN Bronze Gate	Condensate Line Shutoff
S	1	Fig. 962 Bronze Swing Check	Prevent Condensate Backflow
T	2	Fig. 976-A Bronze Globe	Trap Test, Free Blow
U	1	Fig. 352 Bronze Swing Check	Prevent Backflow
V	2	Fig. 47-U Bronze Gate	Cold Water Shutoff
W	4	Fig. 703 Bronze Globe	Flow Meter Pressure Taps
X	4	Fig. 976-A Bronze Globe	Drain Lines
Y	5	Fig. 703 Bronze Globe	Pressure Gage Control
Z	2	Fig. 976-A Bronze Globe	Air Vents
AA	4	Fig. 923 IBBM Globe	3 Way Valve Bypass
BB	4	Fig. 976-A Bronze Globe	3 Way Valve Bypass
CC	6	Fig. 280 Bronze Gate	3 Way Valve Shutoff

JENKINS VALVES
LOOK FOR THE DIAMOND MARK
Jenkins Co

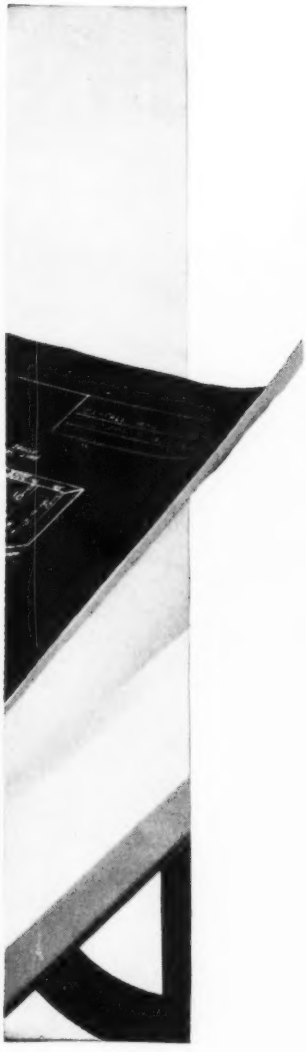
 For more information, write direct or use Reader Service post card.

It's as easy to inspect these outdoor switchgear units as it is to open the door of your office. Yet, there's absolutely no danger to employees making checks. Modern Westinghouse switchgear installations will give your mill safe, dependable power system protection for years.



This Westinghouse indoor power center is located close to the load, thereby reducing cable runs and line losses. Duplicate transformers at each end assure continuous power. If a fault occurs on one line, the other transformer will handle the temporary overload while repairs are made.

Two Westinghouse units modernized this mill's entire power system



When officials of the Gaffney Manufacturing Company, one of the most modern print cloth mills in the country, called in Westinghouse, they discovered how simple and inexpensive a modern power distribution system can be. Westinghouse engineers studied their problem and recommended only two new units—outdoor metal-clad switchgear and an indoor power center. Yet, look at the benefits they got!

Installation costs cut 10%—voltage improved 5%—Both the Westinghouse switchgear and power center were shipped as completely assembled units—pre-tested and wired at the factory. This saved over 10% in installation costs. Line losses were lowered and 100 feet of cable runs were saved by locating the power center indoors, close to the load. Over-all voltage conditions were improved approximately 5%. More power was available for increasing loads.

High service continuity—low maintenance—Dual feeder cables and transformers in the power center assure continuous power and flexibility. If a fault should occur on one line, the other transformer will carry the temporary overload until repairs can be made. Draw-out air circuit breakers and air-cooled transformers eliminate all of the maintenance necessary when oil-filled types are used. Also, all units are easily accessible, and can be installed or removed with file drawer efficiency.

Complete safety for personnel and equipment—Careless employees can't get shocks because all power equipment and feeder circuits are completely enclosed. High-interrupting-capacity air circuit breakers give positive protection against fault currents and dangerous overloads. There's no chance of fire or explosion. The enclosed air-cooled transformers are noninflammable, nonexplosive and contain no corrosive liquids.

There may be an easy, inexpensive solution to your power problems—If you're expanding, modernizing or just want to get the "bugs" out of your present power distribution system, call your Westinghouse representative. He'll go over your electrical requirements and show you how expert Westinghouse planning assistance and highly efficient equipment can give you benefits like these. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

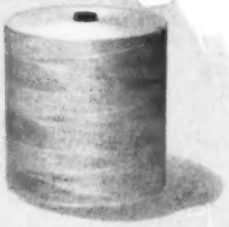
J-94998

YOU CAN BE SURE...IF IT'S Westinghouse

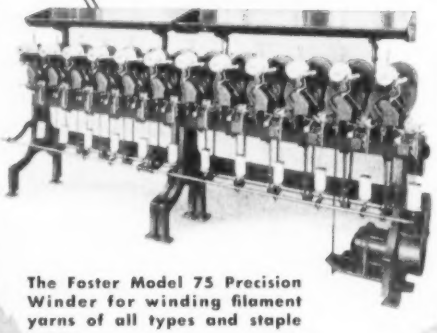
FOSTER MODEL 75 - *A Versatile Precision Winder*

Can YOU use it for one or more of these purposes?

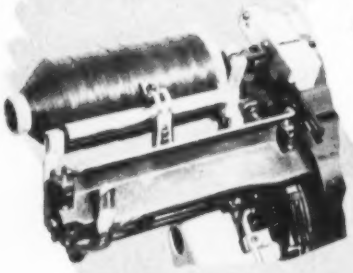
6 inch parallel tube of cotton yarn produced on Model 75.



Winding rayon yarn on 1⅜" dia. dye tubes by means of special holder and pressure roll assembly, which makes possible very soft packages. (No. 5 durometer reading)



Straight edge cone of filament yarn wound on Model 75. Weights up to 12 lbs. with some types of yarn, such as rayon tire cord yarn.



The Foster Model 75 Precision Winder for winding filament yarns of all types and staple yarns.

Winding King Spool by means of special attachment which utilizes time saving combination pressure roll and guide.

Pineapple cone of filament yarn produced with special attachment. Preferred for Nylon yarn.

FOSTER MACHINE CO.

WESTFIELD, MASS., U. S. A.

Southern office, Johnston Bldg., Charlotte, N. C. — Canadian Representative, Ross Whitehead & Co. Ltd., 1475 Mountain St., Montreal, Que. — European Representative, Muschamp Taylor, Ltd., Ashton-Under-Lyne, England.

For more information, write direct or use Reader Service post card.

For a Wide Range of Finishes That Withstand Repeated Washings . . .

RHONITE R-I

Extraordinary washfastness distinguishes cotton, rayon, and blended fabrics that have been finished with RHONITE R-1 for crush resistance and stabilization of shrinkage.

This is equally true whether the finish is plain, calendered, or embossed.

Whatever the effect, cottons and other textiles treated with RHONITE R-1 can be laundered over and over again and still maintain their mill-fresh beauty, their resistance to wrinkling and shrinkage.

RHONITE *is a trademark, Reg. U.S. Pat. Off. and in principal foreign countries.*

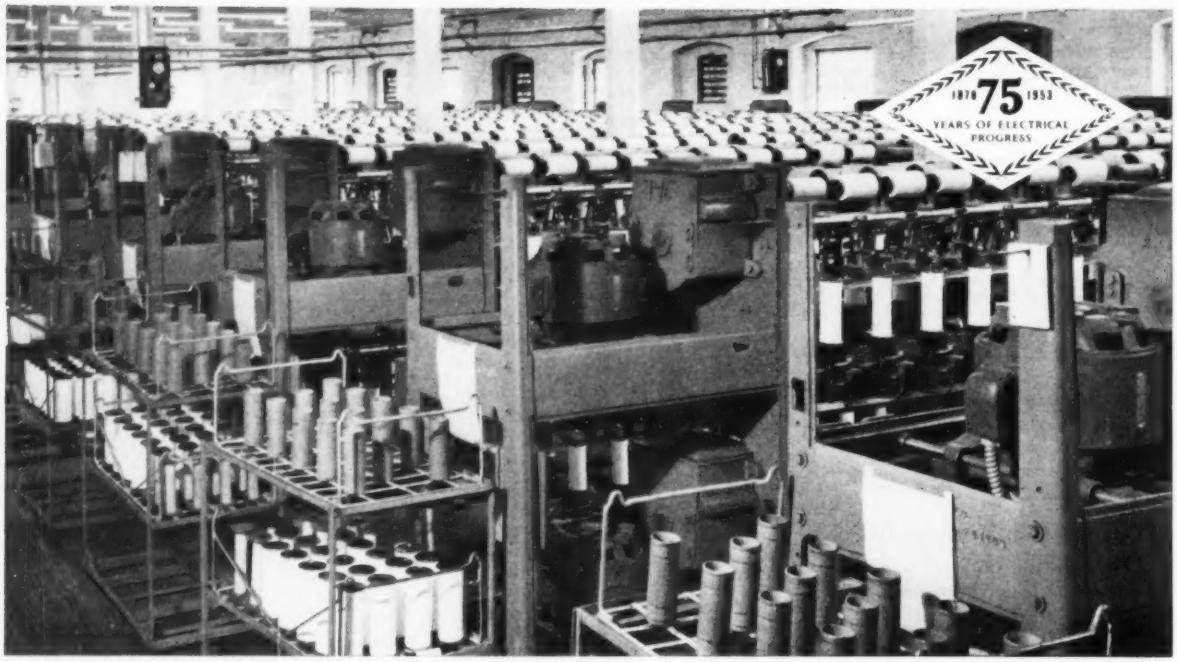
Write or call for complete information about RHONITE R-1 —one of the quality chemicals for textile finishing made by Rohm & Haas Company.

CHEMICALS FOR INDUSTRY

ROHM & HAAS COMPANY

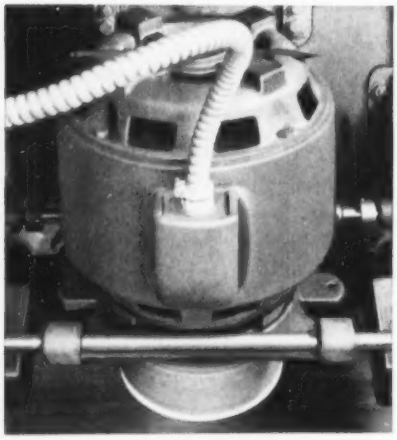
WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries



MORE HORSEPOWER, SMALLER FRAMES make G-E vertical twister motors ideal for double-deck installations. Motors (shown with compartment covers removed) fit easily between decks, are easily relubricated.

G-E vertical twister motors pack high hp in small space



SHAFT-UP OR SHAFT-DOWN, these G-E motors deliver plenty of power for high spindle speeds needed on today's twisters.

Compact motors specially designed for double-deck twisters

Here's the answer to your need for twister motors with higher horsepower in smaller frame sizes—a compact, easily relubricated General Electric vertical motor specially designed to fit in limited space. Over-all motor length is shortened by keeping end shield depth to a minimum, with an effective cooling system in these round-frame motors.

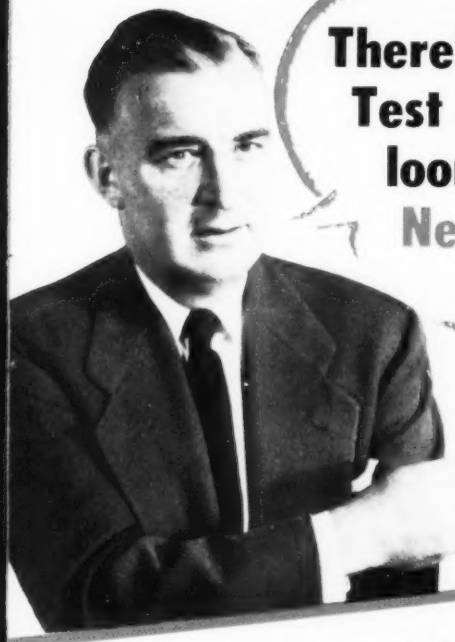
Pressure relief lubrication system permits easy relubrication when needed without dismantling motor. Rigid cast-iron construction is highly adaptable to vertical face mounting. Formex* wire windings are impregnated with synthetic-resin varnish and coated with extra-tough Glyptal* red for greater dependability. These tough G-E motors are available in ratings to fit all leading makes of double-deck twisters.

Specify General Electric on your twister for the compact, reliable motor needed to keep twisting and throwing on a continuous basis. For more information contact your nearest G-E Apparatus Sales Office. General Electric Company, Schenectady 5, N. Y. 654-31

*Reg. Trade-mark of General Electric Company

You can put your confidence in—

GENERAL ELECTRIC



There's no proof like PERFORMANCE— Test Dayton ThoroChecks on your own looms at our expense and discover New check strap economy!

FREE TEST OFFER!

Dayton ThoroChecks offer you these money-saving advantages . . .

- **SAVE LABOR**—Little or no adjustment is needed. Scientific processing eliminates "growing" and elongation.
- **SAVE TIME**—Week-end temperatures or humidity have no slow-start effect on Thoro-Checks.
- **SAVE REPLACEMENT**—Daytons give 25% to 50% more service, reducing replacement costs. Replace singly or in sets as needed.
- **REDUCE PICKER AND SHUTTLE WEAR**—Smoother checking lessens wear on picker and shuttle, adds longer life, greater efficiency.

SEE HOW DAYTON EQUIPPED MILLS ARE SAVING 25% to 50%

MAKE THIS COST-FREE TEST OF Dayton ThoroChecks

Say the word and a Dayton representative will make all arrangements for a FREE test on your own looms . . . will even install the straps for you. It's Dayton's way of proving Thoro-Checks are the finest on the market . . . that big savings await you with these Dayton endless check straps. This offer is set up on a priority based upon date of receipt of your coupon. Insure your early cost-free test by mailing the coupon now!

DAYTON RUBBER COMPANY
Textile Division · Woodside Bldg., Greenville, S. C.

CLIP AND MAIL COUPON FOR FREE TEST TODAY

DAYTON RUBBER COMPANY
Textile Division, Dept. T D 2, Woodside Building
Greenville, South Carolina

O.K. Prove to me that **Thoro-Checks** will save time and money. Have your representative arrange our **FREE** test at earliest possible date. I understand there is no cost or obligation whatsoever.

NAME_____ TITLE_____

FIRM_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

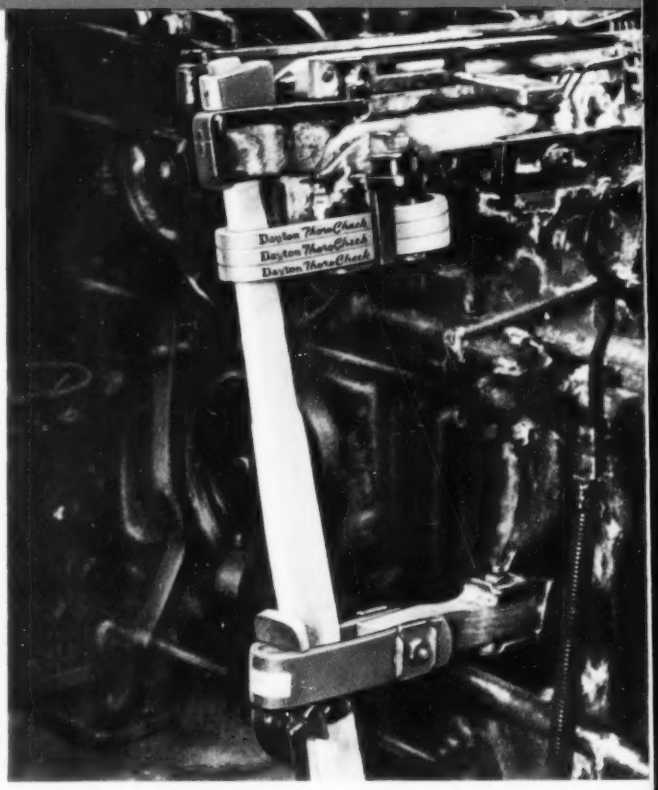
Dayton *ThoroCheck* Straps outlast, out-perform all others in actual mill applications!

MILLS REALIZE 25% TO 50%
Saving with New Dayton Endless Check Straps

Dayton Scientifically Processed Check Straps Offer Safer, More Efficient Operation for Modern, High-Speed Looms

Many mills are turning to Dayton Thoro-Check straps as part of their improvement program. They *know* Dayton straps are scientifically processed for modern high-speed looms and know of the savings to be had in using Daytons exclusively.

A large southern mill, for example, installed Daytons on their X-2 looms, subjected them to 5 day round-the-clock operation for more than 10 months . . . the results were reduced cost and increased performance beyond expectation. Dayton Thoro-Checks gave continuous, smoother checking from the start and are still going strong. Other straps on the same looms lasted only 2 to 3 months. The savings in this case are rapidly paying for the installation costs.



The mill that operates this X-2 loom believes in keeping costs down. That's why their looms are equipped with Dayton Thoro-Checks.

Make your own FREE Dayton test . . . Here's all you do . . .

Fill out the coupon on the other side and mail it to Dayton Rubber Company, Textile Division. A Dayton representative will do the rest! He'll arrange a convenient time with you, install the Dayton check straps and point out the many advantages you receive, all without any cost or obligation to you! See why more and more mill operators enjoy bigger savings with Daytons. Make your free test NOW!

There's no proof like "on the loom" performance.

FILL OUT COUPON ON OTHER SIDE AND MAIL *TODAY*
FOR COST-FREE TEST RIGHT ON YOUR OWN EQUIPMENT

Dayton Rubber

Since 1905

Textile Products for Better Spinning and Weaving

Dayton Rubber Co., Textile Div., Woodside Bldg., Greenville, S. C.

© DR 1953

EQUALIZE THE SQUEEZE with Miller AIR CYLINDERS

Miller Cylinders on Three-Roll Mercerizing Padder Built by Cook P. & N. Machine Co.

Two Miller Air Cylinders (one at each end of the pressure roll) provide the steady, even "squeeze" so essential for the pressure rolls of Textile machinery.

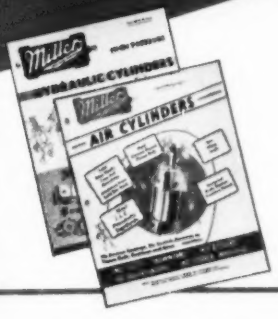
The variation in friction co-efficiency in these cylinders is practically negligible. Thus, whether the pressure is to be constantly held or re-applied as required, the "twin" cylinders can be depended upon to react simultaneously and in perfect unison to the slightest adjustment. Also, any desired pressure on the rolls can be duplicated and maintained at will.

These top performance qualities are "built-in" features of Miller Standard Air Cylinders proven 98% plus efficient (at 80 psi). The Miller Non-Adjustable Seals assure *consistency* of performance throughout cylinder life. This consistency is further guaranteed over exceedingly long periods of time by such standard Miller features as solid steel heads and caps, hard chrome plated piston rods, dirt wiper seals and non-corrosive cylinder barrels.

Miller

AIR CYLINDERS FOR

- Padders
- Washers
- Steamers
- Rope Squeezers
- Bleaching Equipment
- Dyeing Equipment
- Other Textile Machinery



WRITE FOR CYLINDER BULLETINS A-105 and H-104

Complete Miller cylinder line includes: air cylinders, 1½" to 20" bores, 200 PSI operation; low pressure hydraulic cylinders, 1½" to 6" bores for 500 PSI operation, 8" to 14" bores for 250 PSI; high pressure hydraulic cylinders, 1½" to 12" bores, 2000-3000 PSI operation. All mounting styles available.

SALES AND SERVICE FROM COAST TO COAST

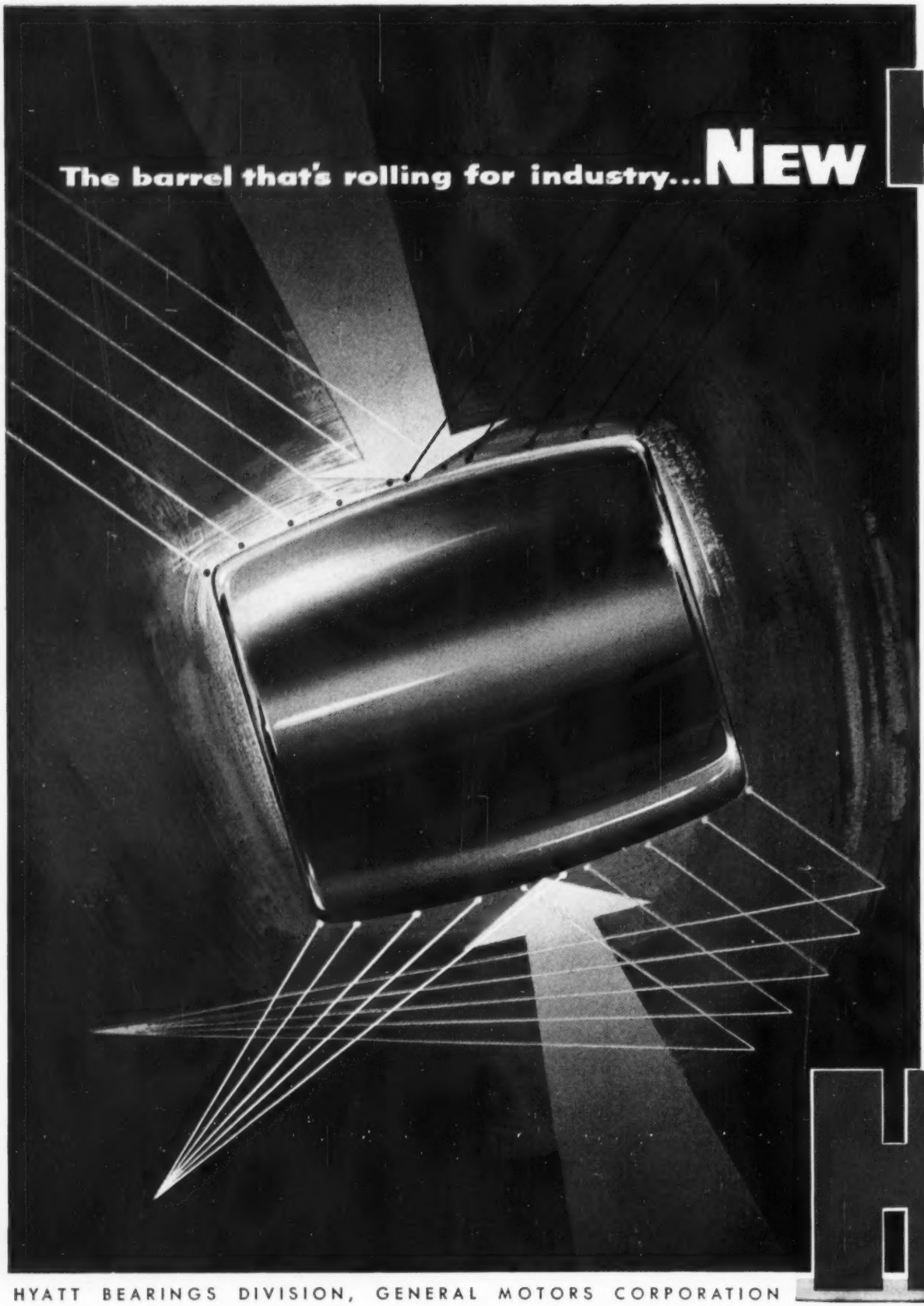
CLEVELAND • YOUNGSTOWN • DAYTON • PITTSBURGH • PHILADELPHIA • BOSTON • HARTFORD • NEW YORK CITY • BUFFALO • ST. PAUL • GRAND RAPIDS • DETROIT • FLINT • FORT WAYNE • SOUTH BEND • INDIANAPOLIS • MILWAUKEE • LOUISVILLE • KANSAS CITY • SEATTLE • LOS ANGELES • SAN FRANCISCO • BALTIMORE • DENVER • ST. LOUIS • MOLINE • CHICAGO • HOUSTON • TORONTO, CANADA and OTHER AREAS

Miller

MILLER MOTOR COMPANY

2002-06 N. Hawthorne Ave., Melrose Park, Ill.

AIR & HYDRAULIC CYLINDERS • BOOSTERS • ACCUMULATORS
COUNTERBALANCE CYLINDERS



HYATT BEARINGS DIVISION, GENERAL MOTORS CORPORATION

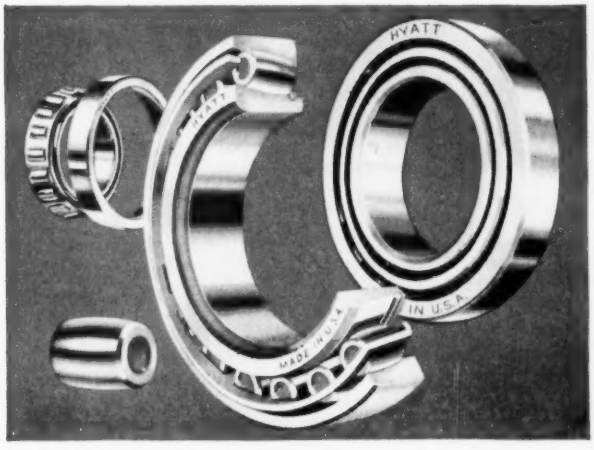
YATT BARREL BEARING

now available in volume!

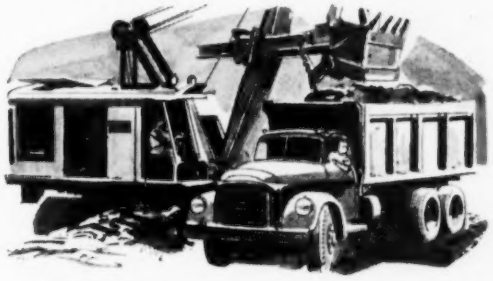
Hyatt is rolling out the barrels! . . . and a familiar shape is giving a big lift to modern industry! A new Barrel Bearing —pioneered and perfected by Hyatt—is available in volume for the first time! There's no other bearing quite like it—and it's ready for a starring role in industrial production!

The Barrel name comes from the barrel shape of the rollers . . . but its superiority in bearing applications comes from *dual-purpose design* and *self-aligning ability!* This unique bearing takes load from any direction . . . and operates at full load-carrying capacity under conditions of misalignment! And in addition, the barrel shape of the rollers combines the low rolling friction of a ball with the high load capacity of a cylindrical roller—so that the Barrel Bearing is ideal for a wide range of applications.

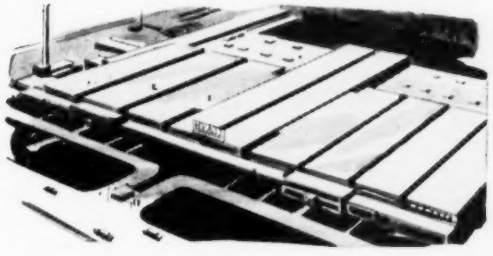
Expensive? *Not at all!* Advanced manufacturing processes —plus the facilities of one of the newest and finest bearing plants in the world—make the initial cost far lower than you would expect! . . . For full information on this newest solution to the friction problem, write to the address below.



Self-aligning action makes the Barrel Bearing ideal for tractors and farm implements. Over many years, its durable, dependable performance has been established in a wide range of these applications.



In trucks and construction equipment, too, Hyatt's Barrel Bearing operates with full efficiency under conditions of heavy, multiple-direction loading. Unique roller and race design distributes the load over large areas of contact.



Hyatt's new plant, in Clark Township, N. J., is among the most modern in the world. New equipment makes possible advanced manufacturing processes, and research facilities are the finest in the bearing industry.

YATT ROLLER BEARINGS

HARRISON, NEW JERSEY

 For more information, write direct or use Reader Service post card.

Cast-iron end brackets help maintain alignment, assure smooth, quiet starting and running.
Rotor assembly with ball bearings in place. Large fans assure adequate ventilation.
Strong, rigid cast iron frame, smooth contours permit free circulation of air.
Century Textile motors are ruggedly built for long service life.
Century's

TEXTILE MOTOR SHEDS LINT

-796

- STREAMLINE DESIGN
- COOLING AIR FLOW

Smooth clean air passages permit cooling air to enter the motor through the end brackets. This steady blast of air circulates near the bearings, around the windings and out through the adequate air passages in the frame.

Lint and textile dust pass through the motor readily, without clogging. This results in clean radiation surfaces, which means that the motor operates at normal temperature.

Century Ball Bearing Textile Motors are lubricated at the factory for the life of the lubricant — under normal service, this is several years without re-lubrication.

However, evaporation or oxidation due to high temperature determines the ultimate life of the lubricant. Century construction permits re-lubrication, when required, without dismantling.

In addition to textile motors, Century builds a complete line of electric motors in sizes from ⅛ to 400 horsepower. They are available in open rated drip proof, splash proof, enclosed fan cooled and explosion proof frames to meet any atmospheric hazard.

For complete information, including dimensions and prices, write today.

Century C MOTORS

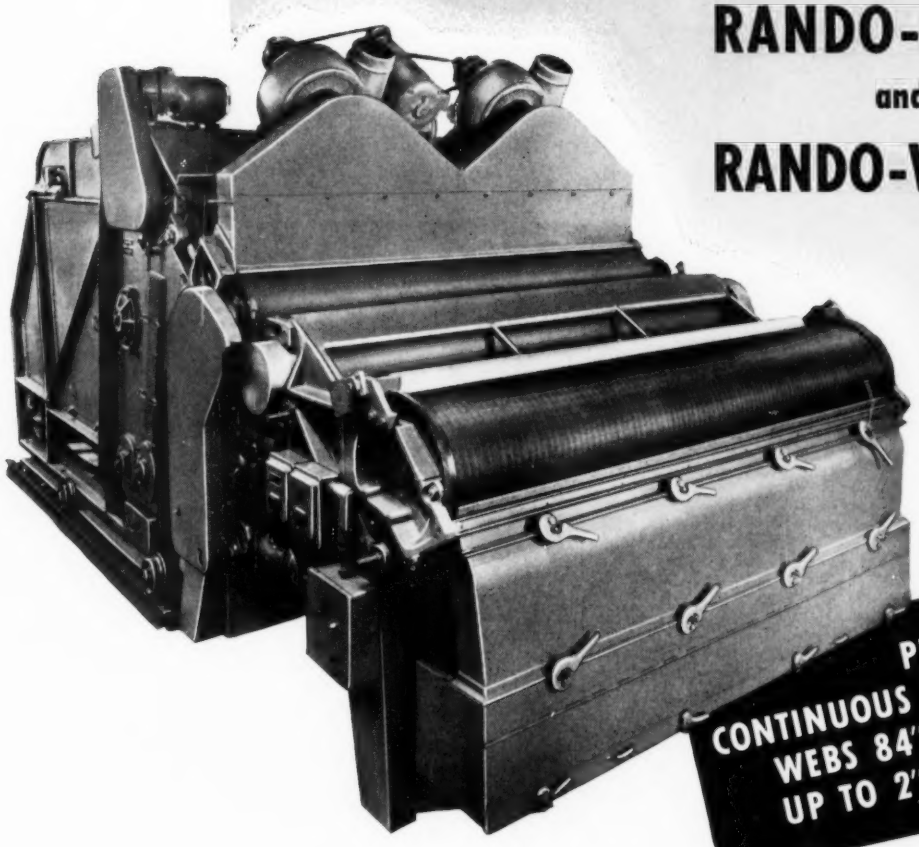
CENTURY ELECTRIC COMPANY

1806 PINE STREET, ST. LOUIS 3, MISSOURI • OFFICES AND STOCK POINTS IN PRINCIPAL CITIES

For more information, write direct or use Reader Service post card.

NEW 84-inch Wide

RANDO-FEEDER
and
RANDO-WEBBER



PRODUCES CONTINUOUS RANDOM WEBS 84" WIDE UP TO 2" THICK

Basically the Model 84 is the same as the Model 40. It lays the same type of web without crosswise, vertical, or horizontal pattern to the fiber. However, capacity is far greater because of the increased width. Continuous webs can be made in thicknesses from paper-thin to 2 inches. Preliminary tests indicate production capacity from 80 to 430 pounds per hour on waste and staple fibers.

NEW OPPORTUNITIES

Now with the Model 84 RANDO-FEEDER and RANDO-WEBBER producing webs 84" wide *new* opportunities and *new* fields are opened for processors of waste and staple fibers. This is particularly true in the following fields—pressed felt, punched felt, automotive and furniture upholstery, pads and waddings, industrial package wadding, and as base material for coated fabrics and reinforcement materials where wide widths are advantageous or are necessary for production requirements.

HAVE YOUR OWN FIBERS PROCESSED IN OUR LABORATORY...WRITE FOR DETAILS

40-INCH and 60-INCH RANDO-FEEDER and RANDO-WEBBER also available

TEXTILE DIVISION
CURLATOR
CORPORATION
EAST ROCHESTER, NEW YORK

"These large packages from the new Whitin 12" x 6½" Roving Frames are certainly cutting down our card room costs!"

"You're right, Jim, and our spinning costs are cut even more!"

For making large roving packages containing approximately 53 oz. of roving, Whitin now offers a 12" x 6½" Roving Frame.* To mills running 1.00 H.R. or coarser, it offers many advantages and substantial reductions in manufacturing costs.

Large roving packages require less doffing; material handling is also lessened. Both of these factors improve Card Room efficiency. More important are the savings that are made by reducing creeling time and costs in spinning. The 12" x 6½" bobbin holds approximately 100 per cent more roving than the 10" x 5", and its use lowers creeling costs by approximately 45 per cent.

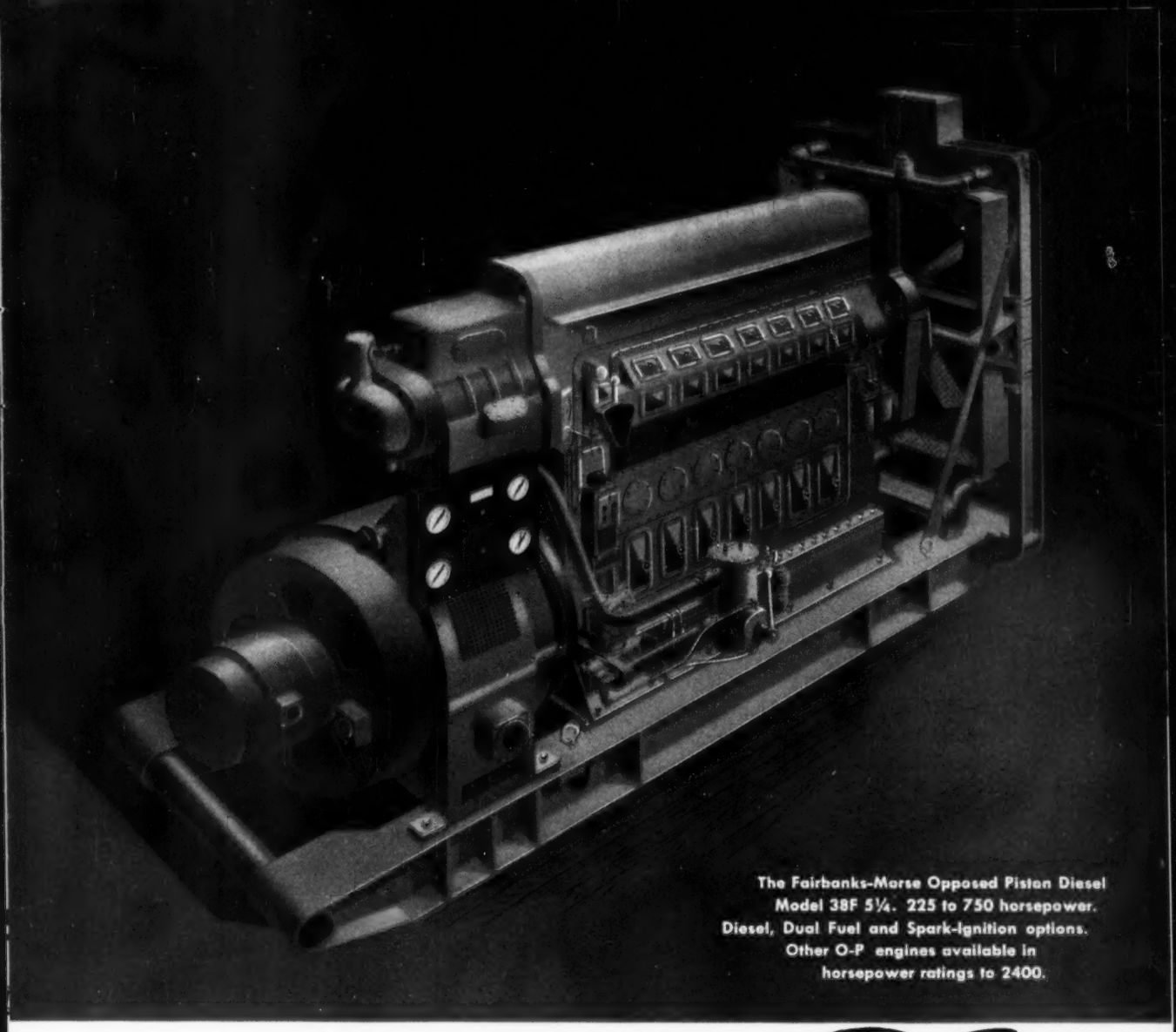
Why not investigate now and make the savings that many other mills are getting with these Whitin 12" x 6½" Roving Frames. For complete details, consult your nearest Whitin Representative.

** Available with Whitin Regular Draft, Inter-Draft or Long Draft*

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.



The Fairbanks-Morse Opposed Piston Diesel
Model 38F 5¼. 225 to 750 horsepower.
Diesel, Dual Fuel and Spark-Ignition options.
Other O-P engines available in
horsepower ratings to 2400.

...always a need for something *Finer*

It was designed and built without thought of price... built only to give the maximum of heavy-duty horsepower in a minimum of space... plus an unvarying reliability upon which you could stake a balance sheet of operating costs and profits.

The price?

Not quite as low as conventionally designed and conventionally manufactured engines, but low enough to insure that no one who wants and needs an engine which gives more, need forego its ownership. For the more difficult tasks of producing power, this engine is a fulfilling answer.

Fairbanks, Morse & Co., Chicago 5, Illinois.

FAIRBANKS-MORSE
a name worth remembering when you want the best

DIESEL AND DUAL FUEL ENGINES • DIESEL LOCOMOTIVES • RAIL CARS • ELECTRICAL MACHINERY • PUMPS • SCALES • HOME WATER SERVICE EQUIPMENT • FARM MACHINERY • MAGNETOS

Pays for itself in

The narrowing speed of the new "Reading 100" is greater than the top operating speed of some machines now in use.

The "Reading 100"—built for a speed of 100 courses per minute in regular mill operation—has a consistent narrowing speed of 75 courses per minute. This speed, largely the result of the use of end control for the narrowing operation, dramatizes the extra production that is yours to command with this new machine.

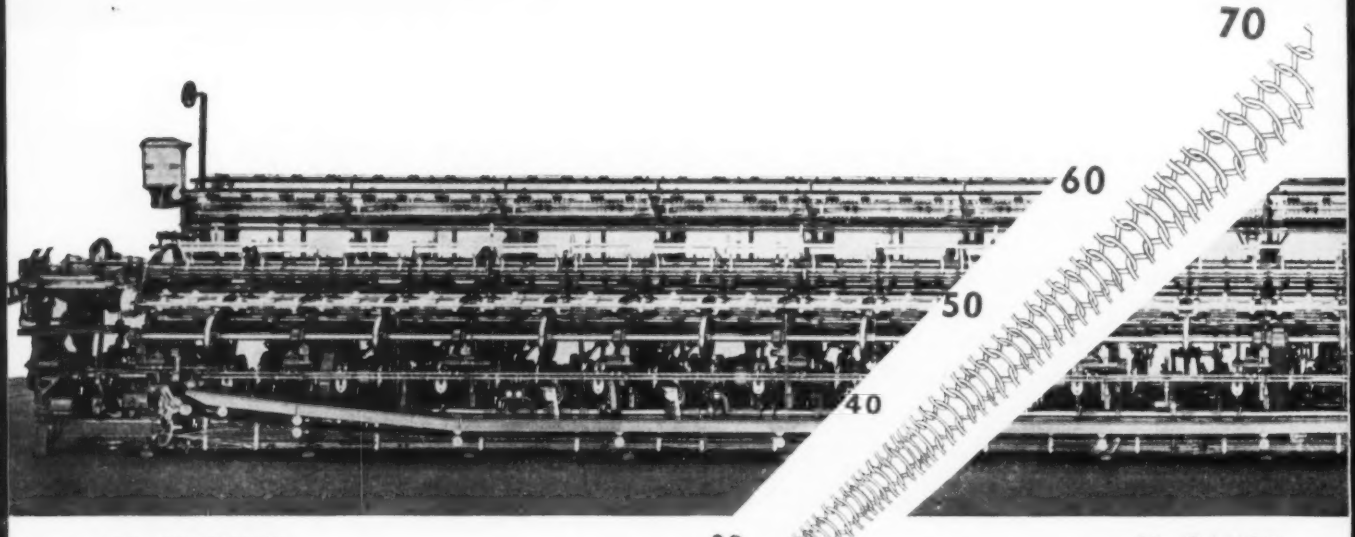
The "Reading 100" is the fastest multiple-section full-fashioned knitting machine ever built. That means extra courses per minute, extra dozens per shift, finer fabrics at top running speeds.

For many years, the Reading Machine has set the standard for the production of fine quality full-fashioned stockings.

For the new top running speeds, cam motions have been completely redesigned. With the exception of needle bar cams and balancing cams, all cam settings are made with a single gauge, assuring synchronous operation and greatly reducing time required for making or checking settings. Balancing cam action has been increased for better balance at high speeds.

The center bed of the new "Reading 100" has an automatic heating cable that brings the machine up to operating temperature before start-up, maintains proper temperature over shut-down periods of short duration and provides a most satisfactory method of overcoming difficulties due to expansion and contraction.

Compare the performance of the new "Reading 100" with your present full-fashioned knitting equipment. See if you don't agree that the new "Reading 100" will quickly pay for itself in extra production . . . extra profits. Let us give you full details.



30 SECTIONS

51 GAUGE

extra production

100

95

90

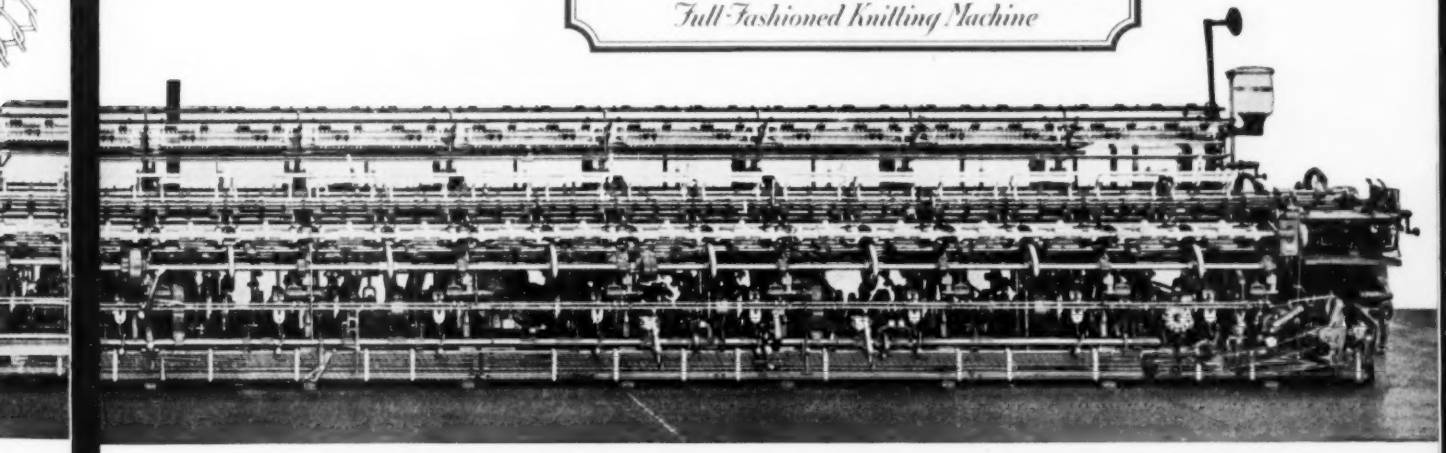
85

80

5

100 courses per minute

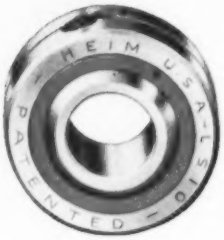
The "READING 100"
Full-Fashioned Knitting Machine



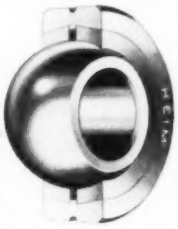
60 GAUGE

66 GAUGE

TEXTILE MACHINE WORKS
READING, PENNA., U. S. A.



This is the HEIM Unibal Spherical Bearing.
It has a single, hardened ball which oscillates freely in all directions in its bronze socket.

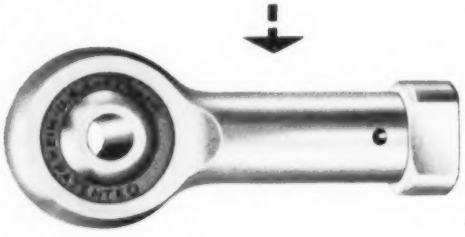


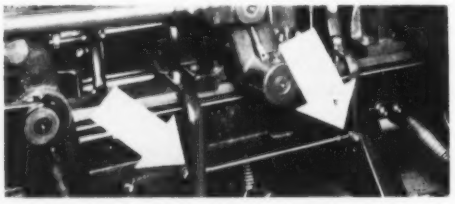
Cut away to show its construction, it looks like this . . .

When this is built into a rugged sweepstick of rubber-bonded fabric, it stops that "jerky" pick action which is caused by an elongated stud hole. Replace your worn out sweepsticks with this HEIM Unibal Sweepstick.

This same Unibal Spherical Bearing **when made in a male or female rod end corrects misalignment in all directions.**

Heim Rod Ends are a part of linkage mechanisms on many of America's textile machines.





One application, for example, is that of controlling the automatic engagement and disengagement of the Covering Knife Motion on The Reading Full-Fashioned Knitting Machine, made by Textile Machine Works, Reading, Pa. The Heim Rod Ends form an important connecting link between a control unit on the front of the machine and an automatic operation device at the rear.

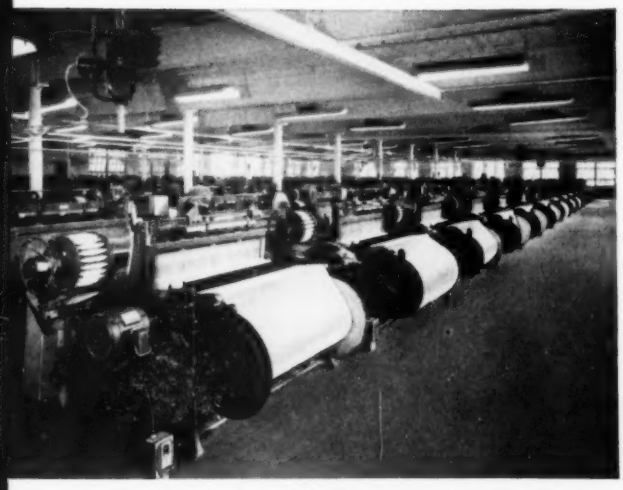
THE HEIM COMPANY

FAIRFIELD, CONNECTICUT

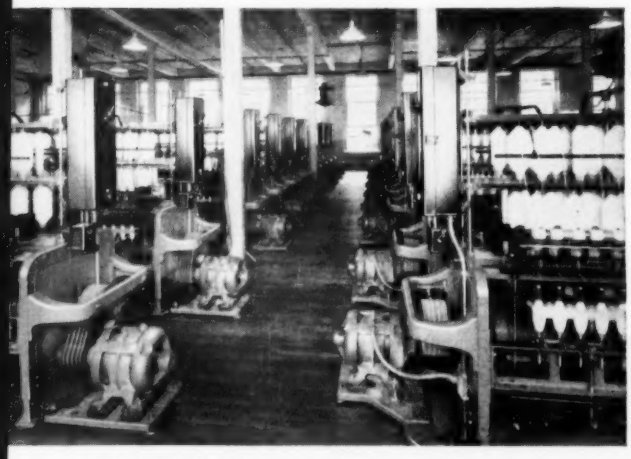
Bearings, Rod Ends, Sweepsticks for the Textile Industry.

CUTLER-HAMMER

MOTOR CONTROL FOR THE TEXTILE INDUSTRY



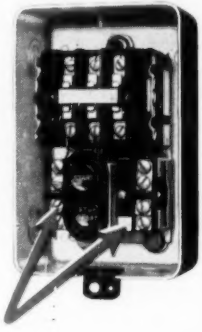
at LEWARD COTTON MILLS. **Cutler-Hammer Loom Switches and Pedestals equip the loom room. Leward Cotton Mills, Inc., Worthville, N. C.**



at STATESVILLE. **Cutler-Hammer Combination Starters and Shipper Rod Switches on spinning frames in STATESVILLE DIVISION, The Seminole Mills, Statesville, N. C.**

CUTLER-HAMMER EUTECTIC ELEMENT OVERLOAD PROTECTION

One of the most ingenious and useful inventions of all time, Cutler-Hammer Eutectic Element Overload Protection accurately duplicates, measures and responds to heating effect produced within the motor. The world's most widely used and the world's most dependable motor overload protection, not only permits the motor to work *closer* to capacity in all cases but to do so in perfect safety. A standard feature of Cutler-Hammer Control.

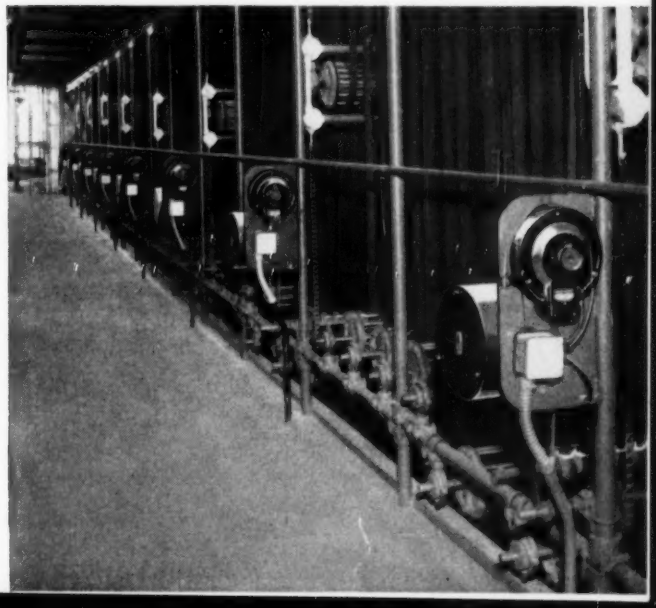


Protection too important to lose by default

The fact that a single production interruption caused by faulty control equipment can cost a textile mill more than the entire purchase price of the control shows clearly that dependability in motor control is too important to lose by default. Motor control must be purchased by *name*... not merely by size and type. Many mills have found it pays to standardize on Cutler-Hammer Motor Control and refuse all substitutes. They have found Cutler-Hammer dependability far more than a mere competitive claim, that it can stand out in operating records as an important economy. They recognize it as the earned advantage of the longest and most intense specialization in motor control engineering... a safeguard for every motor control need from the simplest starter to the most complex of electronic equipment. You too will find it pays to insist on Cutler-Hammer Motor Control. A network of Authorized Cutler-Hammer Distributors throughout the textile manufacturing areas insures prompt attention and supply. CUTLER-HAMMER, Inc., 1457 St. Paul Avenue, Milwaukee 1, Wisconsin.

CUTLER-HAMMER
MOTOR CONTROL
C-H

at CONE MILLS. **Cutler-Hammer Dancer Roll Rheostats and Vernier Rheostats on 20 motor indigo dye range. Cone Mills, Greensboro, N. C.**



Widest choice . . . *for engineered instrumentation*

EACH of the thousands of industrial processes presents its own peculiar problems of measurement and control. Naturally, no single instrument can solve all of these varied problems. Serious compromises would have to be made in performance, convenience, and cost.

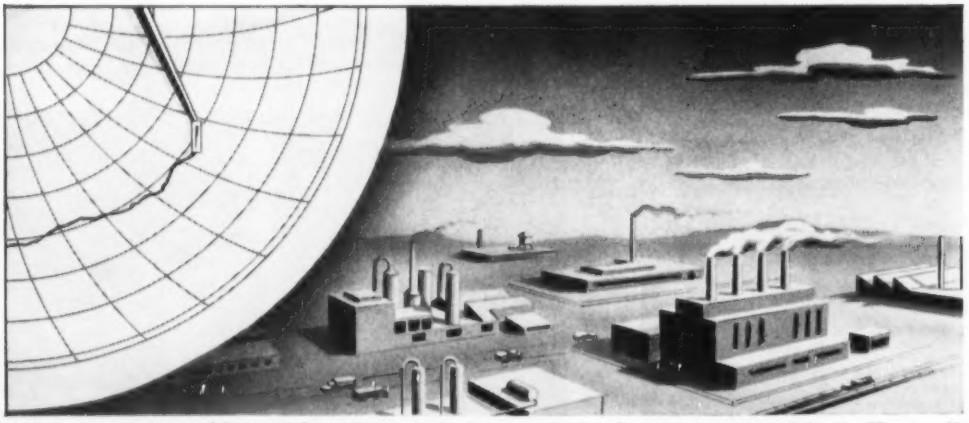
The many Honeywell primary elements, instruments, control systems, and final control elements constitute a uniquely complete family, covering practically the whole spectrum of industrial measurement and control. You can be sure that the combination selected for your job is recommended without bias, and with full consideration for every need of the application.

Included are *ElectroniK* instruments for indicating, recording and controlling a host of variables, in circular and strip chart models; *Tel-O-Set* miniature indicators, recorders and controllers; *Pyr-O-Vane* millivoltmeter controllers; square root and linear flow meters; thermometers; pressure gauges. Electric and pneumatic control systems range from the simplest to the most complex, including fully automatic program control. Primary elements include thermocouples, thermometer bulbs, *Radiamatic* elements, pH assemblies, conductivity cells, flow meter bodies and many others. For final control elements, there is a full range of motorized and diaphragm operated valves. Supplementing these are more than 7000 different non-indicating devices for controlling temperature, pressure, vacuum and other conditions.

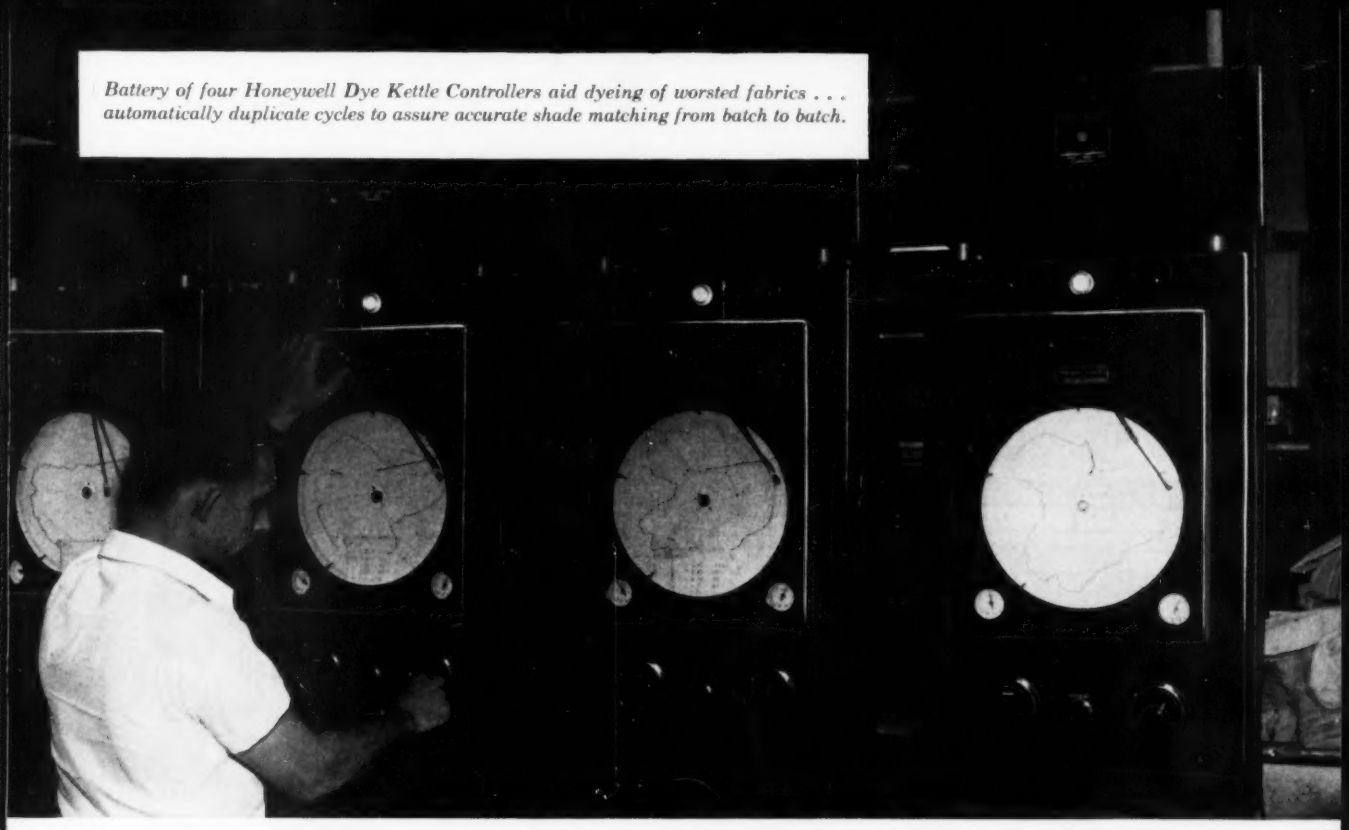
"Building block" approach

These are the building blocks of measurement and control. To combine them into systems custom-fitted to your process, Honeywell offers the know-how gained through years of experience in all branches of industry. Whether your process calls for a single instrument or a complete central control panel, you can be sure of getting the peak in performance and value . . . and the advantages of a single responsibility for the entire installation . . . when you specify *engineered instrumentation by Honeywell.*

"Packaged" *assures*



COMPLETE COVERAGE *of industrial requirements for instrumentation is at your command in the Honeywell line. Whatever you need to measure or control . . . to any accuracy . . . with any of a variety of special features . . . you'll find Honeywell instruments offer the most efficient solution.*



Battery of four Honeywell Dye Kettle Controllers aid dyeing of worsted fabrics . . . automatically duplicate cycles to assure accurate shade matching from batch to batch.

program control system *uniform piece goods dyeing*

THE HONEYWELL Dye Kettle Controller gives the dyer an automatic, foolproof means of duplicating dyeing cycles so he can get the right shade *every time*. With it, he can duplicate the rise, hold and finish phases of the dyeing program to any required accuracy, and with minimum effort.

By taking nearly all the routine cycle-watching burden off the dyer's shoulders, the Controller greatly reduces the man-hours cost for process supervision. And, by eliminating wasteful overheating, it also leads to substantial savings in steam consumption.

The instrument automatically brings dye liquor to temperature at a predetermined rate of rise . . . holds it at temperature for a preset time . . . then shuts the kettle down. Simply by turning a few dials, the dyer can change to any desired program. And he can take over on manual control at any time he wishes.

The system comes as a complete, easily mounted unit . . . readily applicable to any dye kettle, and amply flexible for any mill's requirements. You can get full details about how it can improve dyeing in your plant, from our local engineering representative. He's as near as your phone.

MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, 4509 Wayne Ave., Phila. 44, Pa.

● **REFERENCE DATA: Write for Instrumentation Data Sheet No. 8.3-1, "Dye Kettle Control System."**

MINNEAPOLIS
Honeywell
BROWN INSTRUMENTS
First in Controls

H HONEYWELL

...with TYCOL lubricants on hand!

The Lube that was "Tailored" for Textile Mills! Here's what we mean by lubricants "engineered to fit the job": awhile back, the Engineering Department of a well-known mill asked us to develop an oil that would meet their exacting loom lubrication requirements. After intensive study of the problem, we came up with Tycol Amortac 76. In actual loom usage, we *proved* Amortac to be easy to handle and virtually "splatter-proof," even when looms are being blown down. Result? An oil that features initial low cost . . . that by itself satisfies complete loom lubrication requirements (no chance of a lube mix-up!) . . . minimizes 'seconds' . . . will not build up with lint while feeding through the bearing opening. In every way, Amortac 76 is engineered to do a specific job. One reason why it pays to consult your local Tide Water Associated office . . . first!

TYCOL
INDUSTRIAL LUBRICANTS

Boston • Charlotte, N. C. • Pittsburgh
Philadelphia • Chicago • Detroit
Tulsa • Cleveland • San Francisco
Toronto, Canada

Over 300 Tycol industrial lubricants are at your disposal . . . engineered to fit the job!

TIDE WATER ASSOCIATED OIL COMPANY
17 BATTERY PLACE - NEW YORK 4, N.Y.

REFINERS AND MARKETERS OF VEEDOL . . . THE WORLD'S MOST FAMOUS MOTOR OIL

LOOK! No hands!

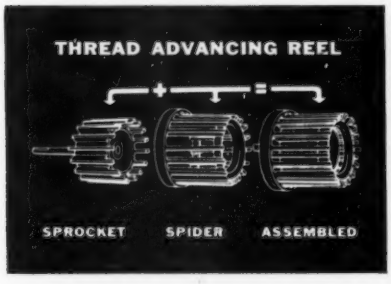
When the spider rides the sprocket to produce flawless rayon

NO HUMAN HANDS or human error can mar the uniformity of Continuous Process rayon.

"SPIDERS," the ingeniously engineered carriers of IRC's famed thread advancing reels, travel the thread from reel to reel as a single strand. Inch by inch, it is processed along its miles and miles of length... spun, bleached, dried, treated and twisted in one continuous operation.

COMPLETE UNIFORMITY of denier and strength as produced by the spiders has never been surpassed. Dyeing streaks are virtually eliminated. Knots and broken filaments have become a rarity.

CONTINUOUS PROCESS is the one process that saves weavers costly seconds due to chronic yarn imperfections. No wonder IRC rayon has become the quality standard among quality weavers.



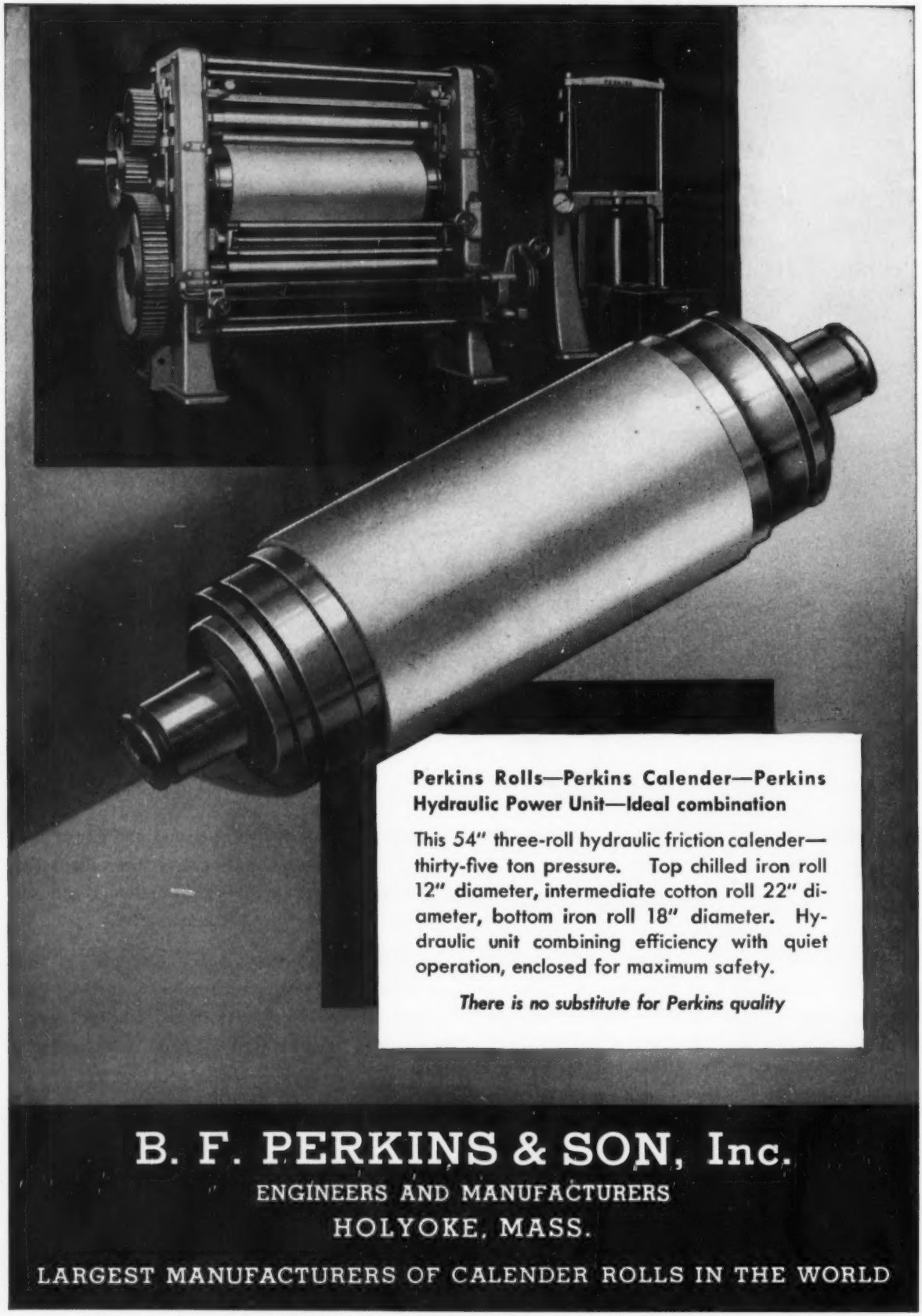
IRC

Industrial Rayon Corporation

Cleveland, Ohio

Sales Office: 500 Fifth Avenue, N. Y. 36

 For more information, write direct or use Reader Service post card.



Perkins Rolls—Perkins Calender—Perkins Hydraulic Power Unit—Ideal combination

This 54" three-roll hydraulic friction calender—thirty-five ton pressure. Top chilled iron roll 12" diameter, intermediate cotton roll 22" diameter, bottom iron roll 18" diameter. Hydraulic unit combining efficiency with quiet operation, enclosed for maximum safety.

There is no substitute for Perkins quality

B. F. PERKINS & SON, Inc.

ENGINEERS AND MANUFACTURERS

HOLYOKE, MASS.

LARGEST MANUFACTURERS OF CALENDER ROLLS IN THE WORLD

. . . then as now

YARN DYED FABRICS

were Supreme

About the time Priscilla induced John Alden to "speak for himself" at Plymouth, this yarn dyed fabric was woven in China – where Manchu swords were bringing to its end the long reign of the Ming dynasty.

More ancient than the craftsmanship of China itself is the use of color to make fabrics more desirable. Always the utmost in originality and acceptability has been achieved with patterns woven from colored yarns.

Invariably, the best fabrics are yarn dyed. If you wish exceptional quality in your colored yarns and expert advice in their use, rely on Franklin Process – yarn merchants and the largest package yarn dyers in the world.

Franklin Process

YARN MERCHANTS AND LARGEST PACKAGE DYERS IN THE WORLD

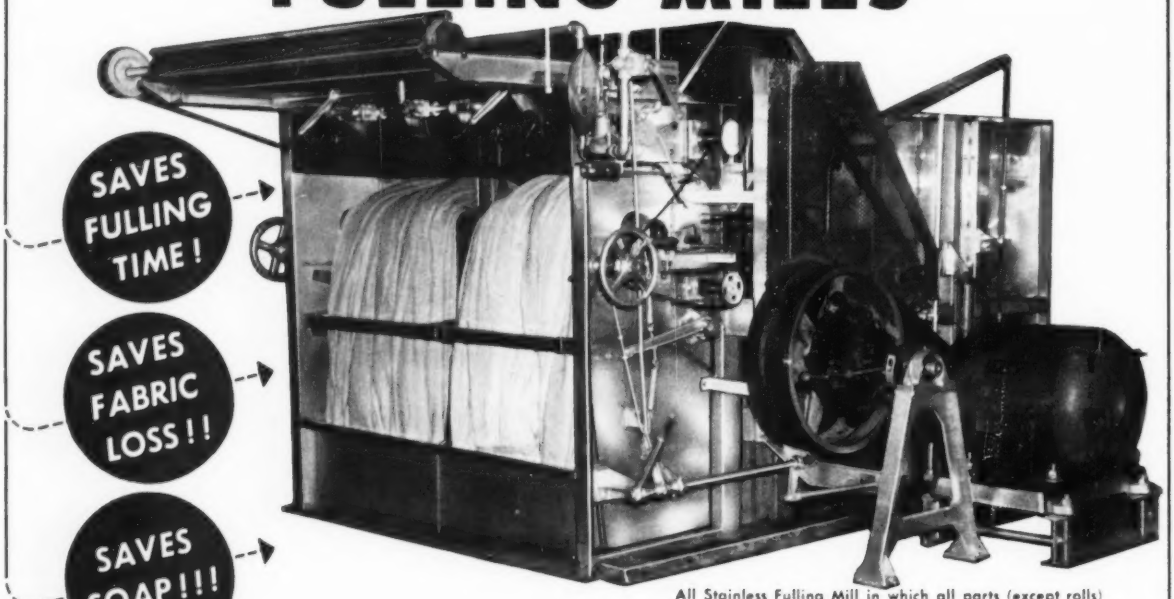
New York Representative – 40 Worth Street
Providence
Philadelphia
Greenville
Chattanooga

17th Century Chinese Fabric.
Museum of Art, R. I. School of Design.

The Fleet Line

for Woolens, Worsteds & Blends

FULLING MILLS



All Stainless Fulling Mill in which all parts (except rolls) that contact cloth are stainless steel.

CHECK THESE FEATURES

1. Solid Stainless Steel, Welded Construction
2. Rubber Ring Rolls
3. Metered Soap Control (Extra)
4. Counterbalanced Knock-Off
5. Pneumatic Top Roll-Pressure Lift
6. All Controls in Front of Machine
7. Cheek Guides & Packing Box Controls on Outside of Machine

WEIGH THESE ADVANTAGES

- ✓ Materially Reduced Fulling Time
- ✓ Saves up to 33% on Soap
- ✓ Carries Larger Load than Old-Fashioned Machines
- ✓ High Reduction in Fabric Dead Loss
- ✓ Greater Uniformity Piece to Piece
- ✓ Identical Fulling Results with Small & Large Loads

NOTE: Both models — Standard Stainless (wood tub) and All-Stainless Steel (of great value where white goods are fulled) — are suitable for all classes of goods, and are made in six sizes from 400 lbs. to 1000 lbs. nominal capacity.

RIGGS AND LOMBARD INC.

FOOT OF SUFFOLK STREET, LOWELL, MASS.

Agents: Paul A. Merriam Co., 1491 Broad St., Prov., R. I. • Charles H. Dunker, 1236 So. Maple Ave., Los Angeles 15, Calif.
Albert R. Breen, 80 E. Jackson Blvd., Chicago 4, Ill. • F. W. Warrington Co., 611 Johnston Bldg., Charlotte, N. C.
Harold A. Zayotti, Jr., P. O. Box 125, Riverton, N. J. • H. E. Mott Co. Limited, Brantford, Ontario, Canada

Electronic spacer patterns guide stockpile through sequence of cuts automatically. Responsive Oilgear Transmission provides speedy travel with pin-point stopping within 3/1000ths of an inch from zero tolerance. Lawson Cutter also used in repetitive single cuts and for trim on sides. Photo in plant of Liedtke Brothers, Chicago.

The RESULT?

Accuracy just 900% better

Production increase 50 to 500%

Over and over and over again, Oilgear Fluid Power proves to be the right solution to a drive problem. Take the case of the Lawson Cutter.

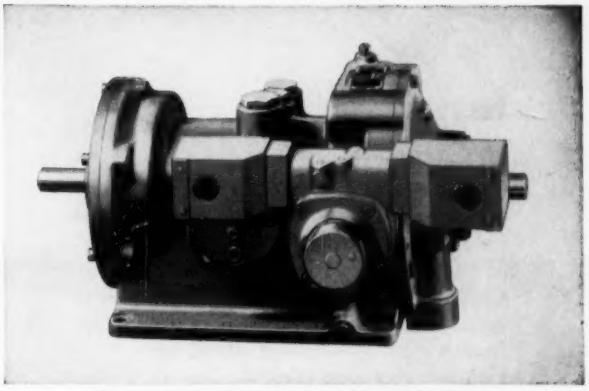
If precision is emphasized anywhere, that "where" is the field of fine color printing of every description. Money, time, effort are spent that art be right, that plates be right, that printing be right—to a hairline. And then comes the cutting operation where all that has gone before is saved—or wasted. Small wonder that cutting remained a hand operation for many years.

But the E. P. Lawson Company, manufacturer of cutting machines, wanted to modernize and mechanize the operation. Its designers turned to an electronic spacer device. This if anything would give precision in marking *where* to cut. But the next problem was to find a power drive capable of *obeying* the orders the electronic signal system was capable of *giving*. Lawson tried one type of drive. It varied all over the map. Lawson tried another type of drive. It was fairly accurate —but did not hold up.

Finally, as so many machine designers have done, Lawson turned to Oilgear. And there, as so many machine designers have done, Lawson found the answer to its problem.

The answer? Undeviating accuracy within 3/1000ths of an inch from zero tolerance—just 900% better than what had been achieved in the past; speed, translating into production increases of 50% to 500% month in and month out. How? Through the absolute responsiveness of Oilgear Fluid Power Drive to the automatic control system. Immediate, shockless acceleration to full speed "forward". Precise measured slowdown as the feed fence nears the target. Precision stopping "on target" for the cut and then rapid acceleration toward the next cut.

Here again is an example of the superlative "right-



Oilgear Two way Variable Speed Transmission as used on Lawson Electronic Spacer Cutters. These drives also provide unlimited speed range from zero to maximum. Speed changes made in split second or specified time.

ness" of Oilgear Fluid Power "generators," motors, transmissions—for almost any type of installation or machine requirement, big, little, and all those in between.

Chances are Oilgear is *the* solution you've been looking for. And Oilgear engineers will be just as quick to tell you if Oilgear is *not* for you. Ask for further information from an Oilgear Engineering Representative. No charge. No obligation. THE OILGEAR COMPANY, 1577 W. Pierce St., Milwaukee 4, Wisconsin.

OILGEAR

OILGEAR

stainless steel bar users:

Get all three at CRUCIBLE

faster

delivery —

Our unique mill scheduling operation is geared to handle any size order for stainless steel bars — whether it be for pounds or carload lots. And we operate our own national chain of warehouses to enable us to make immediate shipments to you directly from a local source over which we maintain complete control.

maximum

machinability —

Recognizing the importance of good machinability, our mill metallurgists maintain close control over all manufacturing operations to insure that the machinability characteristics of each stainless bar produced is of the maximum obtainable.

complete

range —

All our warehouses now have complete stocks of stainless and heat-resistant bars . . . in all sizes, all grades and all finishes. No matter what your requirements are in the way of stainless and heat-resistant bars we can take care of them.

Next time you need stainless steel bars, be sure you call your nearest Crucible warehouse.

CRUCIBLE first name in special purpose steels

53 years of Fine steelmaking

STAINLESS STEEL BARS

CRUCIBLE STEEL COMPANY OF AMERICA, GENERAL SALES OFFICES, OLIVER BUILDING, PITTSBURGH, PA.

REX HIGH SPEED • TOOL • REZISTAL STAINLESS • MAX-EL • ALLOY • SPECIAL PURPOSE STEELS

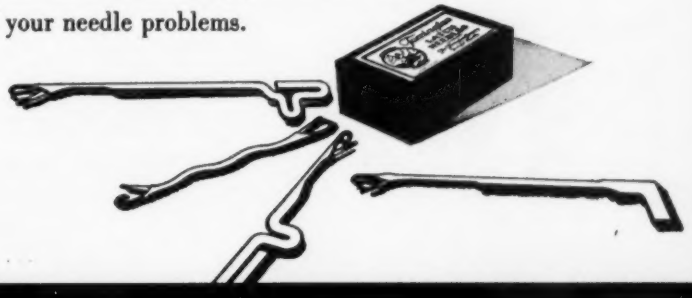
GOOD KNITTING

DEMANDS GOOD NEEDLE SERVICE

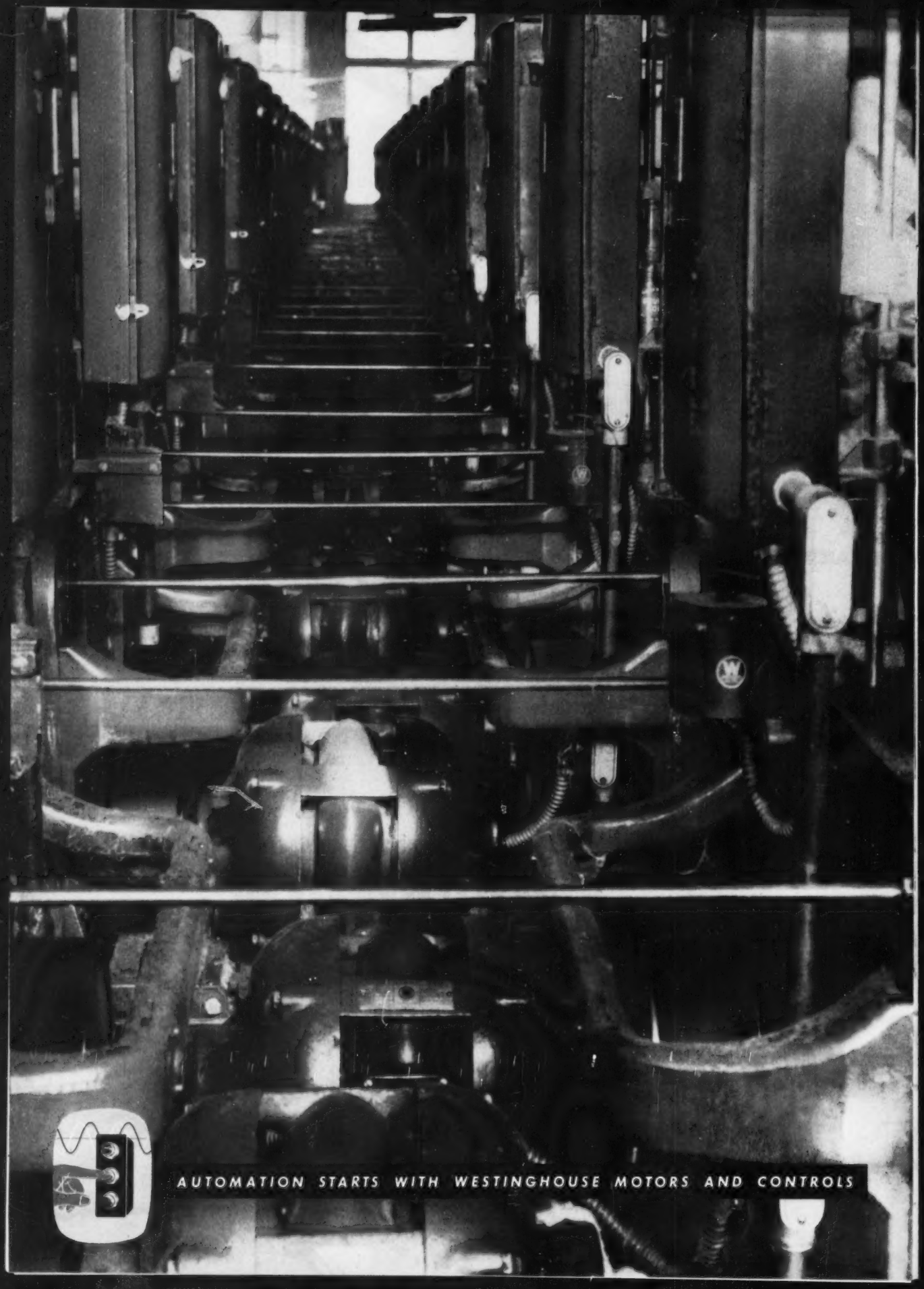
FOR EXPERIENCED TECHNICAL ASSISTANCE . . .

CALL TORRINGTON

Torrington's experience covers the development and manufacture of needles for every type of knitting. Our specialized knowledge of needle design, needle metallurgy and needle behavior is always available through our technical staff to help you in the solution of your needle problems.



THE TORRINGTON COMPANY
Torrington, Conn., U. S. A. · Established 1866
Branches: New York · Philadelphia · Chicago · Boston
Greensboro, N. C. · St. Louis · Bedford, P. Q.—Toronto, Canada
Pacific Coast Representative: E. G. Paules,
1762 West Vernon Ave., Los Angeles 37, Calif.
Broadgate House, 7-10 Eldon St., London E. C. 2, England


AUTOMATION STARTS WITH WESTINGHOUSE MOTORS AND CONTROLS

How to conserve floor space with *Life-Line* motors and controls

As textile production becomes increasingly automatic, areas allowed for maintenance often eat heavily into available floor space. Textile plants today realize the value of putting dependable, maintenance-free equipment in their automatic production picture. It means conserved floor space.

With Life-Line* motors and controls—equipment requiring practically no attention—aisles and work areas previously needed for servicing can be used more efficiently.

Life-Line design and construction deliver motors that can be put to work and forgotten. Bearings are PRE-LUBRICATED and FACTORY-SEALED. They operate year after year without attention. Motor windings are specially insulated to guard against effects of moisture, lint and chemicals.

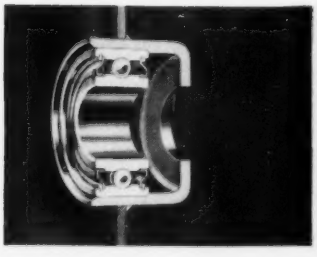
*T. M.

The rugged frame protects motor parts and withstands heavy shocks that might ordinarily mean motor repair or replacement.

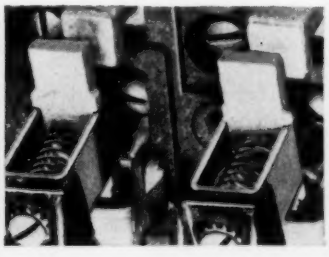
Life-Line controls, too, erase maintenance needs. Silver-to-silver contacts never need filing or dressing. De-ion® arc quenchers snuff out harmful arcs that whittle away at contact life. Kickout spring assures positive operations. These and many other Westinghouse control features provide protective and maintenance-free service.

Facts for filing—Contact your local Westinghouse representative today and ask him for your copy of the booklet: *Motors and Controls for the Textile Industry,* B-5422; or write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

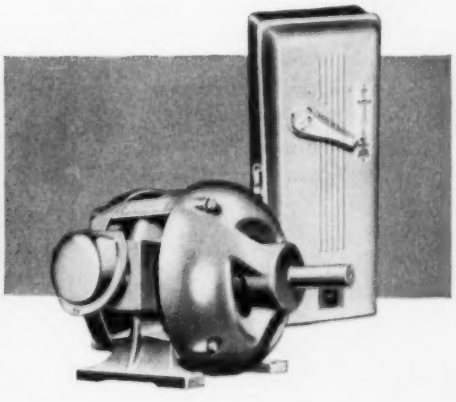
J-21757



Exclusive Life-Line motor bearing has proper lubricant SEALED in. Factory SEALING locks out harmful dust and dirt... does away with bothersome maintenance schedules.



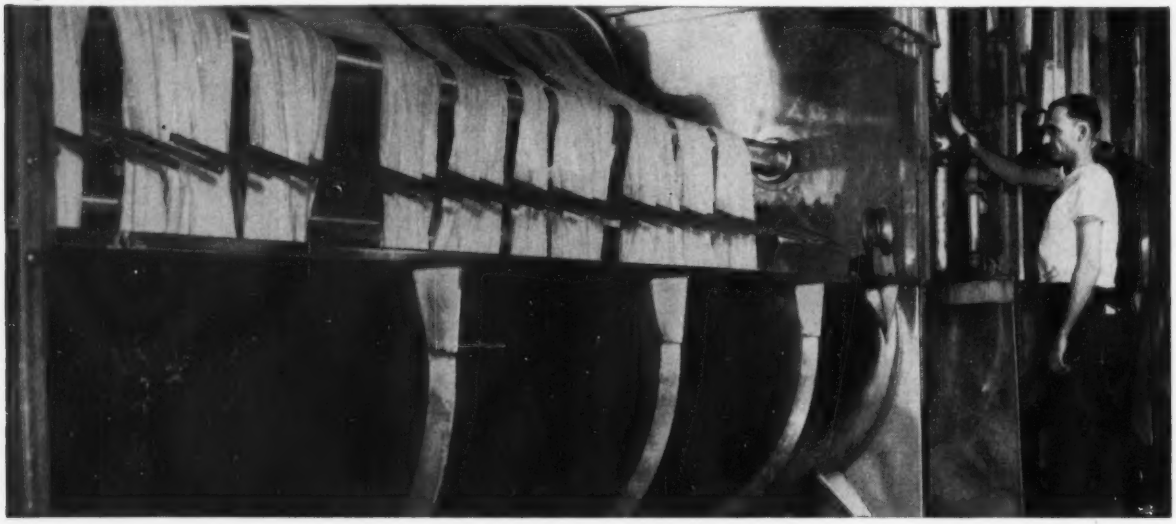
Silver contacts are used on Life-Line controls. This ideal contact material retains its high conductivity even when oxidized. Never requires filing, dressing or cleaning.



YOU CAN BE **SURE**...IF IT'S

Westinghouse

USED HERE as a dye beck, this Rodney Hunt Trushade unit is made entirely of Stainless Steel. These units also are used for bleaching, soaping and washing, and the ease with which Stainless can be hosed down makes it possible to change from one type of operation to another in just a few minutes.



From "gray cloth" to finished goods Stainless Steel protects the fabric best

PROCESSING approximately 2,500,000 yards of cotton and synthetic fabrics per week, North Carolina Finishing Company at Yadkin, N. C., relies heavily on Stainless Steel equipment to keep the product safe from rust contamination.

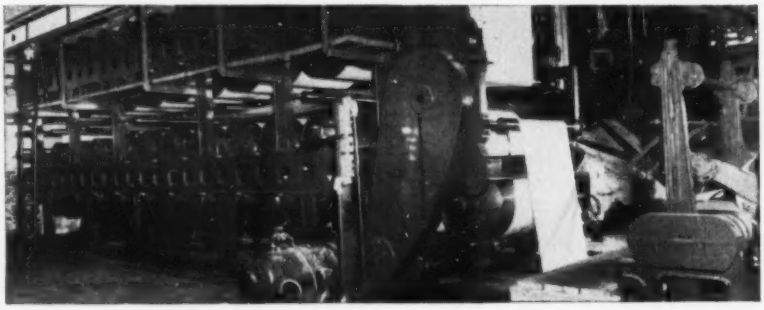
Cotton fabric first meets Stainless Steel in the bleaching operation. In just about all of the many succeeding operations the cloth comes in contact with Stainless Steel.

Washing after mercerizing takes place in wash boxes equipped with Stainless Steel boxes and rolls, and subsequent drying takes place on Stainless cans.

In dyeing, where continuous and pad jig methods and dye becks are used, the boxes, rolls, pipes and fittings are Stainless Steel. Stainless is ideal here because it can be cleaned quickly and easily and doesn't deteriorate, causing frequent and costly shutdowns.

These are only a few of the uses of Stainless Steel in this big finishing plant, but they are graphic examples of how Stainless Steel, with its smooth surface and corrosion resistance, not only protects the fabric best, but also far outlasts other materials. The result is less maintenance, fewer replacements and over-all lower operating costs.

You'll find Stainless Steel equipment can do the same for you. For finest performance, be sure your equipment fabricator uses perfected, service-tested U·S·S Stainless Steel.



THIS 50-CAN BUTTERWORTH DRYER, used for drying the cloth after the washing that follows the mercerizing stage, is equipped with cans of Stainless Steel.

UNITED STATES STEEL CORPORATION, PITTSBURGH • AMERICAN STEEL & WIRE DIVISION, CLEVELAND • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
NATIONAL TUBE DIVISION, PITTSBURGH • TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

U·S·S STAINLESS STEEL

SHEETS · STRIP · PLATES · BARS · BILLETS · PIPE · TUBES · WIRE · SPECIAL SECTIONS

3-1452

UNITED STATES STEEL

News for
the Textile finisher...

New RESLOOM E-50

for

Texturized effects

Improved hand characteristics

Resloom E-50, a modified urea thermosetting resin, adds a product of superior quality to Monsanto's line of resins for finishing.

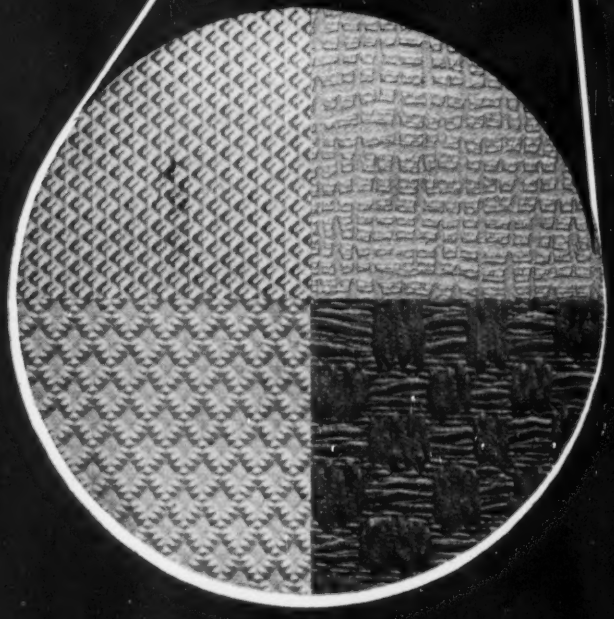
Resloom E-50 is the ideal resin for white and white-background applications because of its non-yellowing characteristics. It provides a soft hand, good shrinkage control, ironability and crease resistance. Furthermore, Resloom E-50 can be used to great advantage for Schreiner, deep embossed, glazed or other texturized effects . . . either alone or in combination with Monsanto's family of thermoplastic and thermosetting resins. Important advantages of Resloom E-50 are:

1. No yellowing of whites due to chlorine pickup
2. No build-up on texturizing equipment
3. Excellent durability of finish to alkaline wash
4. Compatibility with common hand modifiers
5. Excellent storage life
6. Excellent bath stability

For improved durability, crush resistance, stabilization on cottons and rayons, write today for mill-proved application and technical data on Resloom E-50.

MONSANTO CHEMICAL COMPANY,
Textile Chemicals Department,
Boston 49, Mass.

Resloom: Reg. U. S. Pat. Off.



MONSANTO ®

SERVING INDUSTRY . . . WHICH SERVES MANKIND

News for
the Textile finisher...

Monsanto steps up, speeds up product and application research...with first lab-scale embossing machine

The installation, in Monsanto's Textile Research Laboratories, of this new Butterworth laboratory-size embossing machine brings mill operations into the laboratory for the first time. Since this custom-made machine duplicates actual plant equipment on a small scale, it is a practical research tool for the development and evaluation of new resins and new fabrics.

This latest addition to Monsanto's facilities emphasizes again Monsanto's basic research position in the growing field of texturized fabrics—for it provides the ideal means of comparing, of evaluating, the endless variations in resins, formulae and processes that go into the development of a new product or application. Now this work can be done quickly, and, in early stages of development, the need for time-consuming and inconvenient mill trials is avoided.

You will be informed of each improvement—in finishing efficiency and beauty—that evolves from development work on the new machine. Watch for news from

MONSANTO CHEMICAL COMPANY,
Textile Chemicals Department,
Boston 49, Mass.

News for
the Textile finisher...

Now...a choice of three "AC" Catalysts to fit your exact requirements

Catalyst AC . . . Catalyst AC-2 . . .
Catalyst AC-4 . . . with these three products
Monsanto provides textile finishers with the
most complete and dependable line of catalysts
for thermosetting resins available today. Whatever
your problem – whether you are seeking improvements
in texturized effects, hand, crush resistance or stability –
one of these catalysts will bring out the best
in the resin you are using.

New application data, including specific recommendations on
catalyst concentrations, are now available. Your Monsanto
representative has information which may
well save you time and expense. Consult him on
your catalyst problems. Or, if you prefer,
write direct to MONSANTO CHEMICAL COMPANY,
Textile Chemicals Department,
Boston 49, Mass.

Monsanto Catalysts recommended for use with specific resins

Resin	*Catalysts AC*	*AC-2*	*AC-4*
Urea formaldehyde paste:	Yes	No	Yes
Methylated methylol melamine: RESLOOM M-75, M-75 Special, M-80	Yes	Yes	Yes
Methylol melamine: RESLOOM HP, HPS	Yes	Yes	No
Modified urea: RESLOOM E-50	Yes	Yes	Yes
Water repellents:	(Use catalyst recommended for the resin to be used with water repellent)		

NOTE: Monsanto has developed specific information on the use of catalysts for a variety of resin types (including those of other manufacturers), in varying concentrations for a number of end uses such as:

Texturised Effects — ***Nylon Net and Mesh Treatment***
Rayon Finishing — ***Wool Shrinkage Control***
Cotton Finishing — ***Water Repellent Finishing***

Ask for complete information on applications
in which you are interested.

MONSANTO ®

SERVING INDUSTRY...WHICH SERVES MANKIND

NEW BEAUTY IN ALUMINUM INDUSTRIAL SIDING

Installed by MacArthur Company, one of Reynolds approved jobber-erectors for the Austin Company, General Contractors. See below.*

When the Cochran Foil Company, Louisville, Ky., wanted siding as outstanding in appearance as in performance, the specification was obvious...Reynolds Ribbed Embossed Siding. Here is rustproof, corrosion-resistant aluminum *plus* modern architectural design. Applied cost is low. Maintenance cost is practically nil. Aluminum's heat-reflectivity cuts the cooling cost of the building in summer, cuts fuel cost in winter. Light-reflective inner surface is a well-known extra advantage. For cost-cutting efficiency, specify aluminum. For efficiency *plus new* beauty, make it Reynolds Ribbed Embossed Siding.

DESCRIPTION:

METAL THICKNESS: .032" (22 U.S. Std. Ga.).

FINISH: Stipple-embossed.

LENGTHS: 5', 5½', 6', 6½' and so on to 13½'; also 13'10". Special lengths to order.

WIDTH: Over-all width 33⅝", nominal coverage 32".

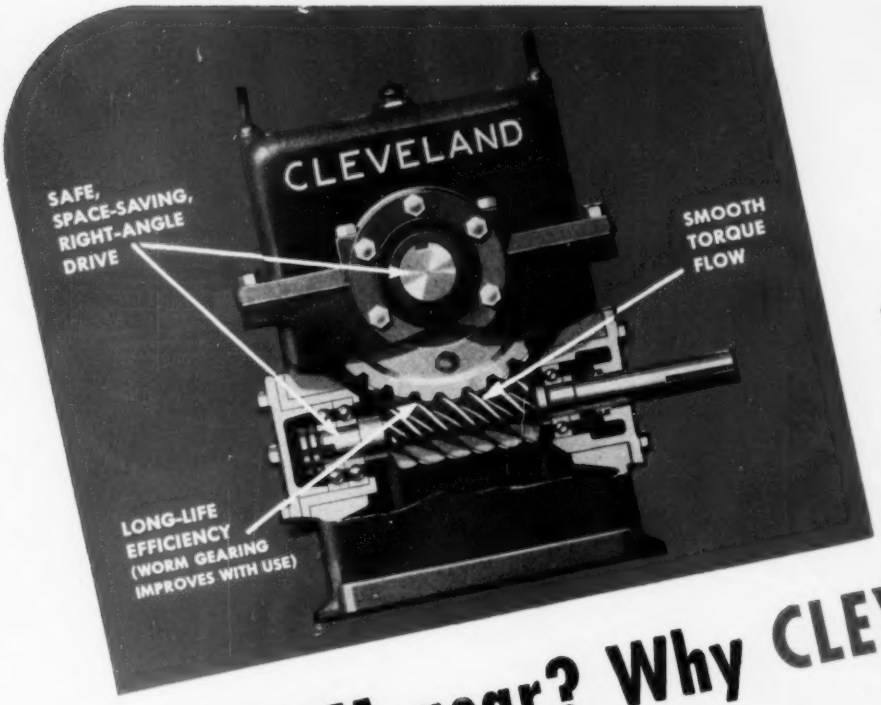
RIBS: Pitch 4" center to center, depth 1".

WEIGHT: 59 lbs. per 100 square feet.

***Comprehensive material and installation service on Reynolds Industrial Building Products now available through an approved jobber-erector system. For literature and technical data, call the nearest Reynolds office listed under "Building Materials" in classified phone books of principal cities. Or write to: Reynolds Metals Company, Building Products Division, 2022 South Ninth St., Louisville 1, Kentucky.**

SEE "MISTER PEEPERS," starring Wally Cox, Sundays, NBC-TV Network.

REYNOLDS *Lifetime* ALUMINUM RIBBED EMBOSSED SIDING



Cutaway shows compact interior design and construction of a typical Cleveland worm gear speed reducer, used in thousands of plants. Clevelands save floor space—are simple to install and maintain. A minimum number of moving parts practically eliminates trouble.

Why WORM gear? Why CLEVELAND?

HERE are some of the inside reasons why Cleveland worm gear speed reducers are specified by many of the leading builders and users of industrial machinery.

• **SAFE, SPACE-SAVING, RIGHT-ANGLE DRIVE**—Clevelands are compact, provide a wide range of reduction speeds. Worm and gear enclosed in sealed housing replace dangerous open gearing, belts and pulleys. Safety always for machine operators and lube men! Gearing runs in oil bath, insures positive lubrication, eliminates oil cans and grease paddles.

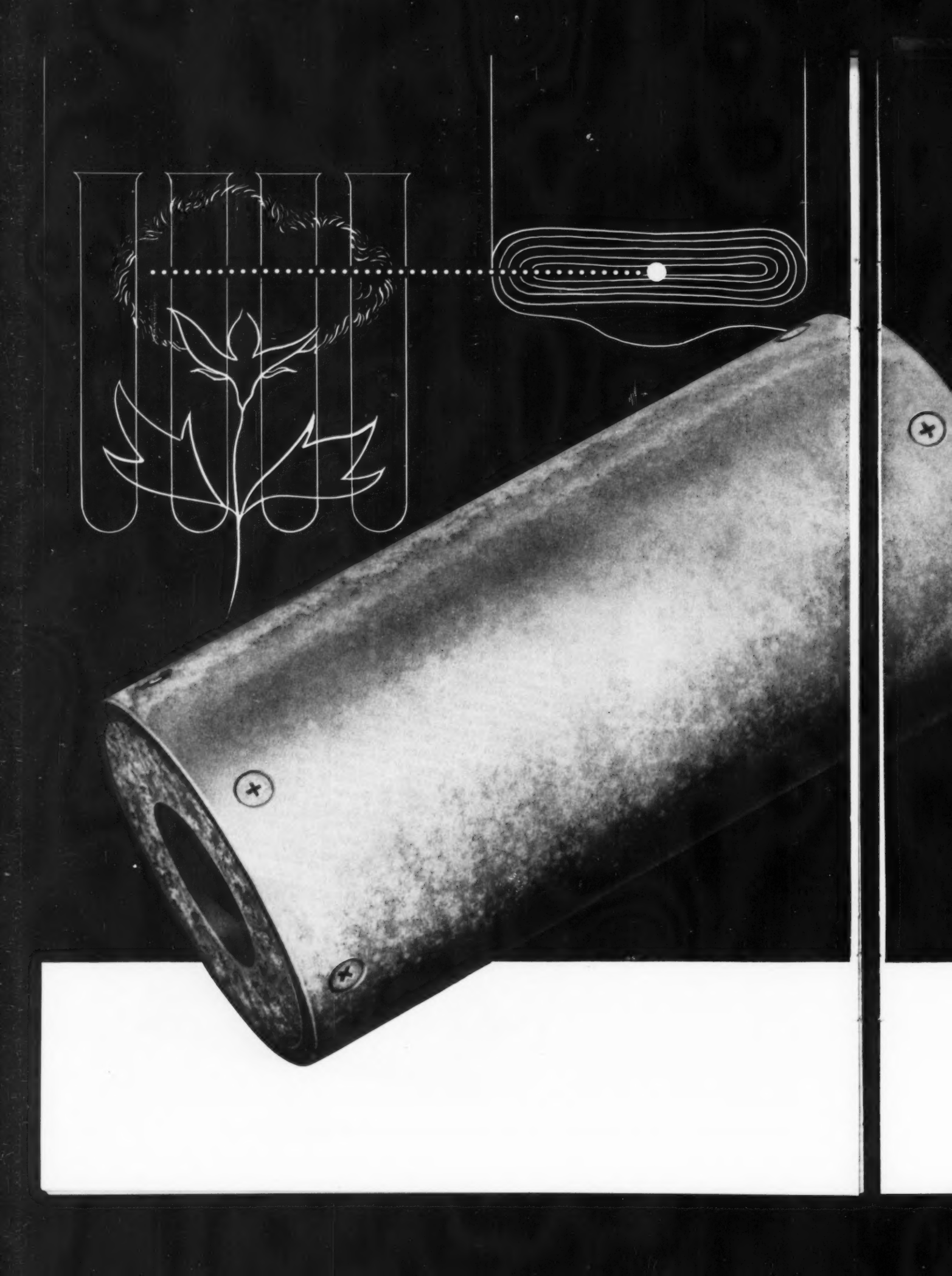
• **SMOOTH TORQUE FLOW**—By virtue of the sliding action of worm on gear, a Cleveland transmits power uniformly and smoothly. Constant angular velocity assures positive control of work on driven machine.

• **LONG-LIFE EFFICIENCY**— Experience demonstrates that Cleveland case-hardened worms and nickel-bronze gears actually improve with use. Even operating under continued, severe overloads, danger of sudden failure is remote. Thousands of Clevelands operate for the life of driven machines.

Get the complete Cleveland story by writing for new Catalog 400 today. The Cleveland Worm & Gear Company, 3268 East 80th Street, Cleveland 4, Ohio.

Affiliate: The Farval Corporation, Centralized Systems of Lubrication. In Canada: Peacock Brothers Limited.

CLEVELAND
Worm Gear
Speed Reducers



Here's what micarta® LAMINATED PLASTICS is doing to boost textile production

A leading textile mill wanted lighter, tougher lap rolls which would stay on the job longer. MICARTA® was the answer. Now the MICARTA lap rolls not only last months longer than the ordinary wooden rolls but their lighter weight permits up to three additional pounds of cotton to be wound on each roll. In addition, the MICARTA surface permits instant pick-up and wrinkle-free winding without the nuisance and expense of removing clinging bits of lap.

Here's what MICARTA can do for you

Light, tough, smooth-wearing MICARTA will pay off for you on products like spinning buckets, shuttles, bobbins, pirns, picker sticks and gears. On other textile applications, too, you can take advantage of its ability to withstand and "cushion" heavy vibration and shock . . . to reduce nerve-wracking noise. MICARTA means economy, less maintenance, more production.

Remember that Westinghouse-developed MICARTA is a thoroughly proved basic material. For the complete story on MICARTA call your nearest Westinghouse office or just fill out the coupon below. J-06542

YOU CAN BE SURE...IF IT'S Westinghouse

Westinghouse Electric Corporation • MICARTA Division, Trafford, Pa. • Attention: L. A. Pedley

micarta® is basic!

Sir: (Please check one)

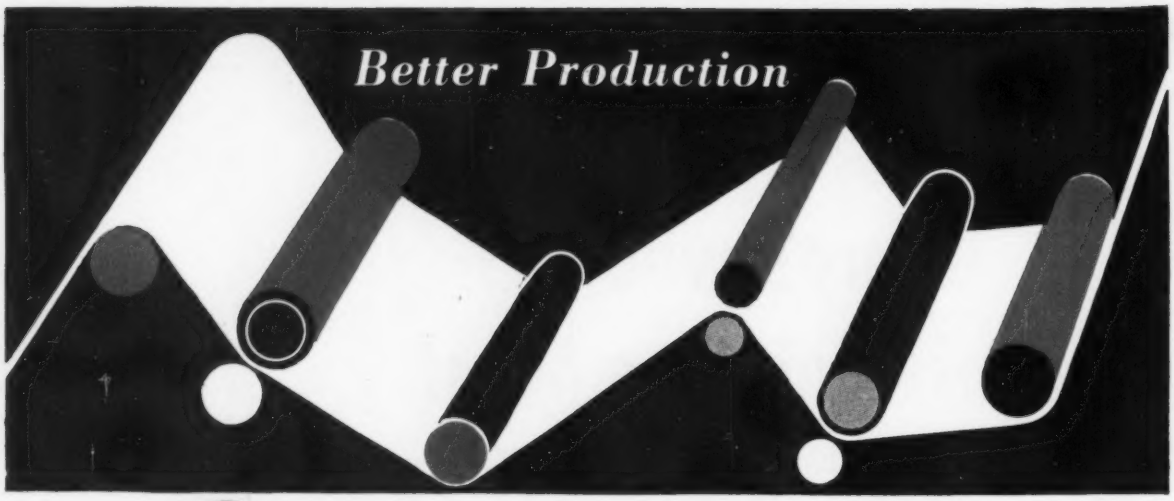
☐ Please have your representative call

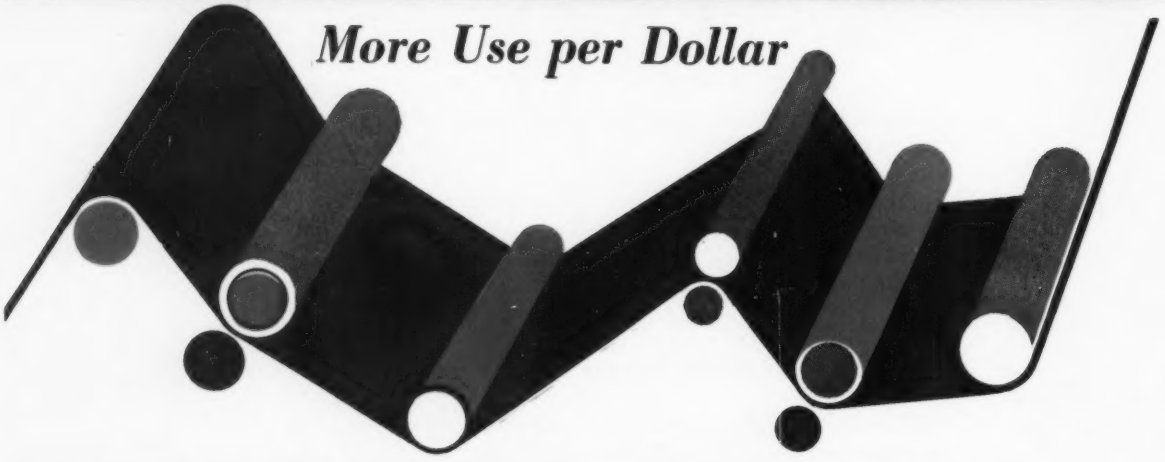
☐ Please send me the complete facts on MICARTA

Name _____ Company _____

Address _____

City _____ Zone ____ State _____





MANHATTAN RUBBER COVERED ROLLS

• OUR NEW NEENAH, WIS. PLANT IS DESIGNED FROM THE GROUND UP TO HANDLE ANY SIZE ROLL COVERING MOST EFFICIENTLY.

You get better production with Manhattan rolls, because they maintain uniform density and perfect crown . . . because they don't oxidize, harden, corrugate or crack . . . and because there can be no separation of rubber from metal core. Yes, Manhattan Rubber Covered Rolls give you better production—and they do this long after you would have to replace other rolls. That's what we mean by MORE USE PER DOLLAR. A specialist from the R/M roll covering plant nearest you will cheerfully advise you or quote on your specifications. Call him next time.

ROLL COVERING PLANTS AT PASSAIC, N. J. . . . NEENAH, WISCONSIN . . . NORTH CHARLESTON, S. C.
TEXTILE ACID TANKS AND PIPE RUBBER LINED AT PASSAIC, N. J. AND NORTH CHARLESTON, S. C.

R/M

MANHATTAN RUBBER DIVISION — PASSAIC, NEW JERSEY

RAYBESTOS-MANHATTAN, INC.

Other R/M products include: Industrial Rubber • Fan Belts • Radiator Hose • Packings • Brake Linings • Brake Blocks
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MR-912

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Letter from a Hosiery Mill...

Gentlemen:

"We are engaged in the manufacture of full-fashioned hosiery . . . The use of your Purotex needle oil is enabling us to secure a safe degree of lubrication and at the same time prevent the formation of rust as well as the build up of size. In addition it scours out completely during the dyeing process. These advantages were not enjoyed with other oils, and we thought you would be interested in learning of our findings."

(Signed) Francis-Louise Full Fashion Mills, Inc.
Kurt Dippmann, General Superintendent

Pretty special stuff

Yes, *needle oil* is rather *specialized.* It must have lightness of color and other special qualities that assure freedom from stain. Yet, in the textile industry, these very qualities do give Purotex a *broad usefulness.*

Pure Oil makes many fine, highly specialized lubricants. *But Pure Oil specializes in general purpose lubricants* . . . industrial oils and greases designed to do several different jobs equally well. To help you reduce inventory, simplify procedure, minimize waste and the chance of error.

Learn how the "SIMPLIFYING SIX" can help you start a labor-saving, money-saving lubrication program. Use the coupon for clear-cut suggestions.

Now meet the SIMPLIFYING SIX

Make **Purolene** or **Puropale** your one general-purpose oil—for circulating systems, ring oil bearings, machine tools.

Make **Poco HTB** your one general purpose grease for resistance to heat, cold, moisture.

Make **Poco Purelube** your one extreme pressure lubricant for all heavily loaded enclosed gears and chains.

Make **Puropale RX** your all-around hydraulic oil both to lubricate and transmit power.

Make **Poco Compound** your open gear lubricant where "staying power" is important.

Use **Pure Spindle Oil B** for all machine tool spindles and similar applications.

Keep it PURE and Simple

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PURE OIL INDUSTRIAL LUBRICANTS

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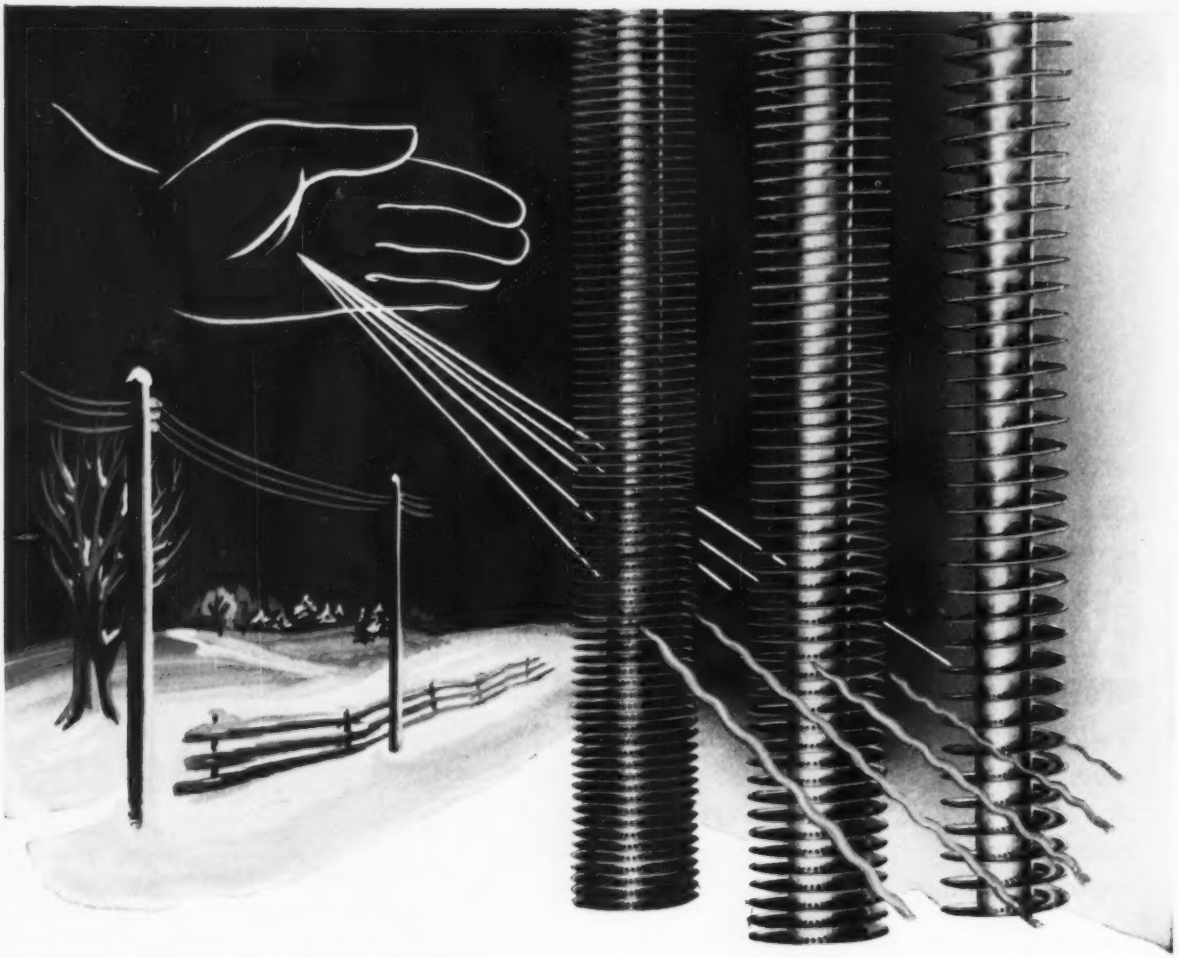
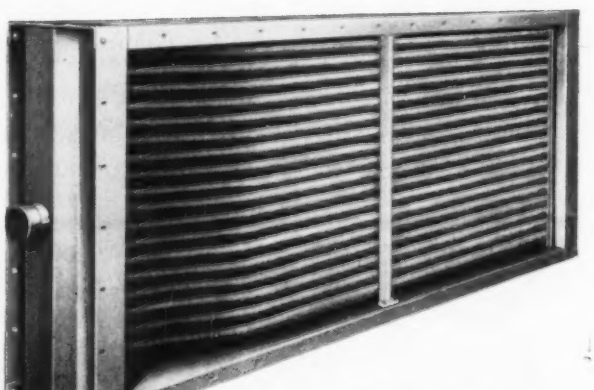


Check winter's icy hand with American Blower Heating Coils

They're quality-built. All tubing is helically wound with copper or aluminum fins in three standard spacings (see above). Coil casings are made of heavy galvanized steel; headers are of die-formed steel.

Whether you need coils for blast heating, zone reheating or whether you want return bend coils or coils for modulated steam control—you'll find the size and type that best fits your needs in the American Blower line. Write for further data.

AMERICAN BLOWER CORPORATION, DETROIT 32, MICHIGAN
CANADIAN SIROCCO COMPANY, LTD., WINDSOR, ONTARIO
Division of American Radiator & Standard Sanitary Corporation



Type S Steam Coil for normal blast heating. Tested and guaranteed for operation with steam up to 200 lbs. gauge pressure and 450° F temperature. Die-formed tube support protects tubes. Write for Bulletin B-1218.

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No. 34 of a series

PREPARED BY AMERICAN Cyanamid COMPANY / CALCO CHEMICAL DIVISION
DYESTUFF DEPARTMENT, Bound Brook, New Jersey
New York • Chicago • Boston • Philadelphia • Charlotte • Providence

Calco®

A COMBINATION HARD TO BEAT

As butter is to bread, Calco Soluble Vat Jade Green is to Calco Soluble Vat Yellow GC when it comes to printing the bright green yellows and chartreuse shades which are widely used on kerchiefs, tablecloths, dress goods, fancy shirtings and colored sheetings.

For printing or dyeing cotton or wool (under certain conditions), or the mixed fabrics such as viscose and acetate, these new Calco Soluble Vats exhibit a versatility which inevitably makes them the popular choice.

Calco Soluble Vat Yellow GC is suitable for roller or screen printing along with azoics, pigments or other soluble vats where acid aging is used. Its excellent uniformity and penetration of color give excellent color results in cotton, rayon and linen dress goods, and in colored sheeting and shirting. Calco Soluble Vat Yellow GC minimizes the inequalities of tightly woven, difficult-to-dye cotton fabrics, slub weave rayons and mercerized broadcloths to produce an attractive solid surface appearance.

Calco Soluble Vat Jade Green produces a pleasing shade of green which can be used as a self shade or as a base for a range of greens, aquas, etc., when used with other soluble vat dyes as shading elements. Although its principal use is in the printing and dyeing of cellulosic fibers, its satisfactory application to wool dyeing should receive increasing attention.

NOT TWO BUT FOUR...

With two new additions, Calcodur* Resin Fast Blue R and Calcodur Resin Fast Blue 6G, we are now offering a complete range of four Calcodur Resin Fast Blues from clear red to bright green shades.

Both of the new colors exhibit very little shade change, good fastness to light after resin treatment and very good light fastness and good wash fastness as self shades on cotton and viscose.

You will get excellent results whether you use these dyes alone or in combination on viscose or cotton since they have good solubility, level dyeing characteristics and uniform exhaust properties.

We highly recommend these resin fast blues:

	Calcodur Resin Fast Blues					
	Self Shade		Aerotex M-3		Aerotex Cream 450	
On Viscose Rayon	R	6G	R	6G	R	6G
Light	7	6	5-6	5	7	6
Wash Test No. 2	4	5	4-5	5	4-5	5
Shade Change						
Alkaline Spotting	4-5	5	5	5	5	5
Acid Spotting	4-5	5	5	5	5	5
Crocking Dry	5	5	5	5	4	3-4
Wet	4	4-5	4	4-5		

"THE PROOF IS IN THE WEARING..."

In the creation of faster dyes, the dyestuff manufacturer relies on the uniform standard laboratory tests which he has set up to simulate actual wearing conditions and to measure relative fastness properties. But the crucial test of the dyed fabric is in actual use, and it is under these conditions that metallized dyes have become more and more popular with dyers.

The field for application of these dyes is expanding and new colors are hastening this expansion. An outstanding metallized dye, Calcofast* Wool Yellow N withstands in laboratory tests the equivalent of 40 days of exposure to bright summer sunlight without fading. Calco Research has also come up with an outstanding bordeaux, Calcofast Wool Bordeaux RB Conc., which is noted for its brightness, clarity and general all-around fastness properties.

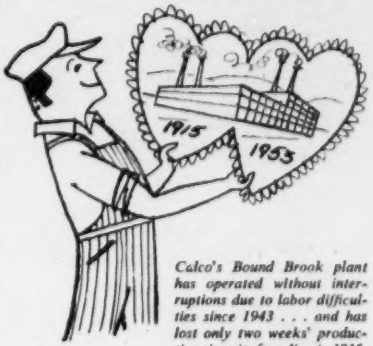
Wherever beauty of shade and good fastness properties are requisites, as in carpets for steamships, airplanes or resort hotels, upholstery fabrics, tropical suitings, men's and women's clothing, bathing suits and neckwear — metallized dyes will be the dyer's choice.

*Trade-mark

For the Textile Bookshelf

The Application of Dyes to Textile Fibers at High Temperatures (Calco Technical Bulletin No. 833). A review of basic studies of the dyeing of textile materials at elevated temperatures, begun in 1941 by Calco in cooperation with the Bachmann Uxbridge Worsted Corporation.

Identification of Synthetic Fibers by Microscopical and Dye Staining Techniques (Calco Technical Bulletin No. 831). Review of stain and microscopical identification tests which have been found very useful in determining the fiber composition of materials being colored. This is often difficult because of the many combinations which are possible and because of the newness of many of the fibers.



Calco's Bound Brook plant has operated without interruptions due to labor difficulties since 1943 . . . and has lost only two weeks' production since its founding in 1915.

Westinghouse Air Conditioning: Willard Sales & Service, Inc., Philadelphia
Consulting Engineers: Cronheim & Weger, Philadelphia; Salvatore S. Guzzardi, Philadelphia

TAILORED AIR

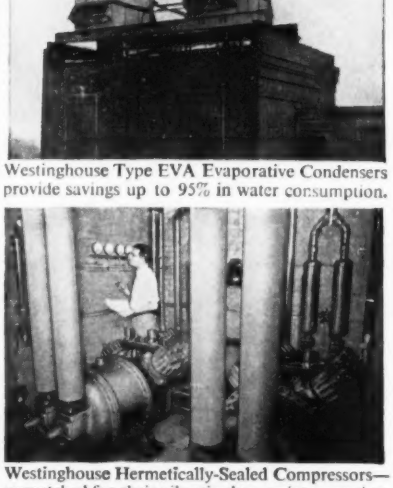
SMOOTHES THE WRINKLES OUT OF SUIT SALES

Dampness from final pressing stays in coats and suits like water in a sponge. Ten-to-one, a suit shipped damp will arrive looking as wrinkled as last week's wash. But 20,000 "Botany Brand 500" men's garments, tailored each week by H. Daroff & Sons, go out in good shape—will be crisp and sales-room fresh when they arrive.

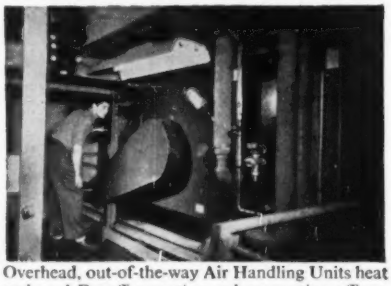
Westinghouse Air Conditioning does the trick by *putting air to work* in this 90,000 garment storage room. Air is kept at 76° and 45% humidity to pull dampness out of suits in six hours—keep them in press and ready to ship any time. And dirt, dust and grime are locked out behind closed doors and windows throughout the year.

Westinghouse equipment can *put air to work* for you, too—with air conditioning, air cleaning or air handling. Call the Westinghouse Air Conditioning Distributor listed in the Yellow Pages, or write Westinghouse Electric Corp., Air Conditioning Division, Hyde Park, Boston 36, Mass.

Westinghouse Type EVA Evaporative Condensers provide savings up to 95% in water consumption.



Westinghouse Hermetically-Sealed Compressors—unmatched for their vibrationless, quiet operation.



Overhead, out-of-the-way Air Handling Units heat and cool Daroff executive and accounting offices.

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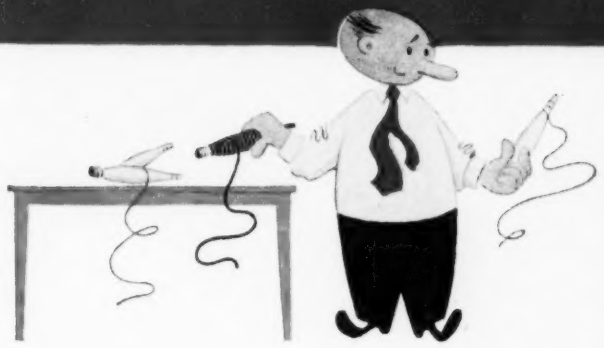
—alone—gives you the choice of 3*



REEVES—with the widest application experience of *any* manufacturer in the specialized field of speed control engineering—knows as well as you do that no *one* type of drive can be the most efficient solution to *every* speed control problem encountered by machine operators and builders.

That's why REEVES builds a *complete* line . . . *three* separate and distinct types of drives . . . all incorporating the same time-tested REEVES operating principle, but each possessing *different* features of design and construction to meet the individual requirements of the individual machinery builder and user.

All three REEVES units are available in the widest range of designs, sizes, speed ratios and automatic controls, assuring the *right* unit for every machine . . . the *right* speed for every operation and every operator, under every changing condition.

A REEVES field engineer, thoroughly familiar with your processes, will be glad to meet with you and discuss your particular speed control problem—without obligation. You can be sure his recommendations will be completely unbiased and impartial as to the unit best suited to your needs because REEVES is the *complete* line! Write for the name of your nearest representative and for your *free* copy of the latest REEVES catalog, No. W56-1C-G.

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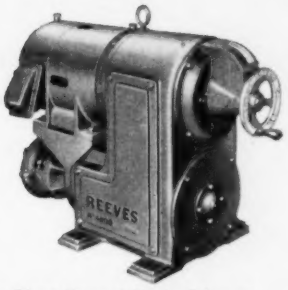
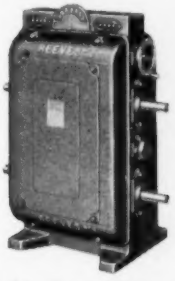
Recognized Leader in the Specialized Field of Variable Speed Control

accurate • variable **REEVES** *Speed Control*



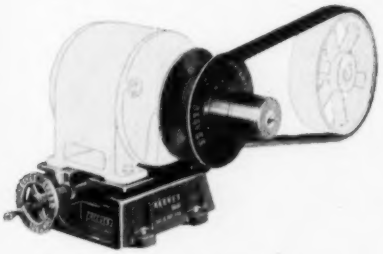
*** Vari-Speed Motodrive®**

A complete variable speed power plant. Combines any standard, constant-speed motor, REEVES speed-changing mechanism and gear reducer in one, compact unit. Sizes to 25 hp; speed ratios as great as 10 to 1.



*** Variable Speed Transmission**

Provides stepless speed adjustability over a wide range—as high as 16 to 1; sizes to 87 hp. Vertical or horizontal designs—open or enclosed.



*** Vari-Speed Motor Pulley**

Converts any standard, constant-speed motor to a variable speed drive. Speed variations up to 4 to 1. Sizes to 10 hp.

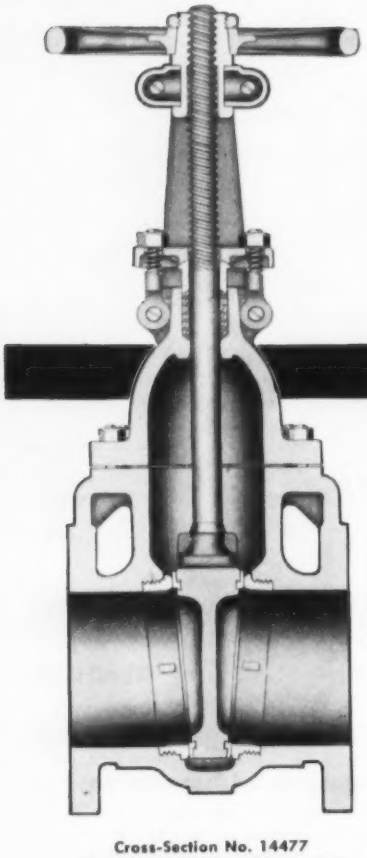
 For more information, write direct or use Reader Service post card.

seating surfaces stay

slick as a Whistle

...in CRANE 18-8 Mo ALLOY TRIMMED ALLOY CAST IRON GATE VALVES

This is the valve that cancels out seating surface corrosion economically in many piping processes. Its seats, disc, and stem are Crane 18-8 Mo alloy steel—an exceptionally high-grade stainless steel, highly resistant to most corrosive fluids.



NOW IN SIZES UP TO 18 INCHES

Cross-Section No. 14477
Crane Alloy Cast Iron Wedge Gate
18-8 Mo Alloy Trimmed
Flanged Ends
WORKING PRESSURES: 200 pounds cold water, oil, or gas, non-shock.
Sizes: 2, 2½, 3, 4, 6, 8, 10, 12, 14, 16 and 18 in.

You'll recognize this valve pattern. It's the same as the famous Crane all-iron wedge gate, with the same liberal metal sections for maximum strength, and with tie-ribs on bonnet and end flanges for extra resistance to line strains. The big difference in these No. 14477 valves is: the body and bonnet are nickel low alloy cast iron, having much better physical properties and corrosion resistance than ordinary cast iron.

TYPICAL APPLICATIONS

In the *Petroleum* industry, these valves are giving outstanding service on oils with traces of mineral acids . . . in *Wood Treating,* on creosote vapors and oils . . . in *Pulp and Paper* processing, on alkaline liquors of various kinds. In fact, No. 14477 valves are ideal for mildly corrosive services where all-iron valves are inadequate but where it is uneconomical to use all-stainless steel valves.

A new circular on No. 14477 gives complete specifications and lists new sizes available. Write direct, or ask your Crane Representative for a copy.

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CRANE VALVES

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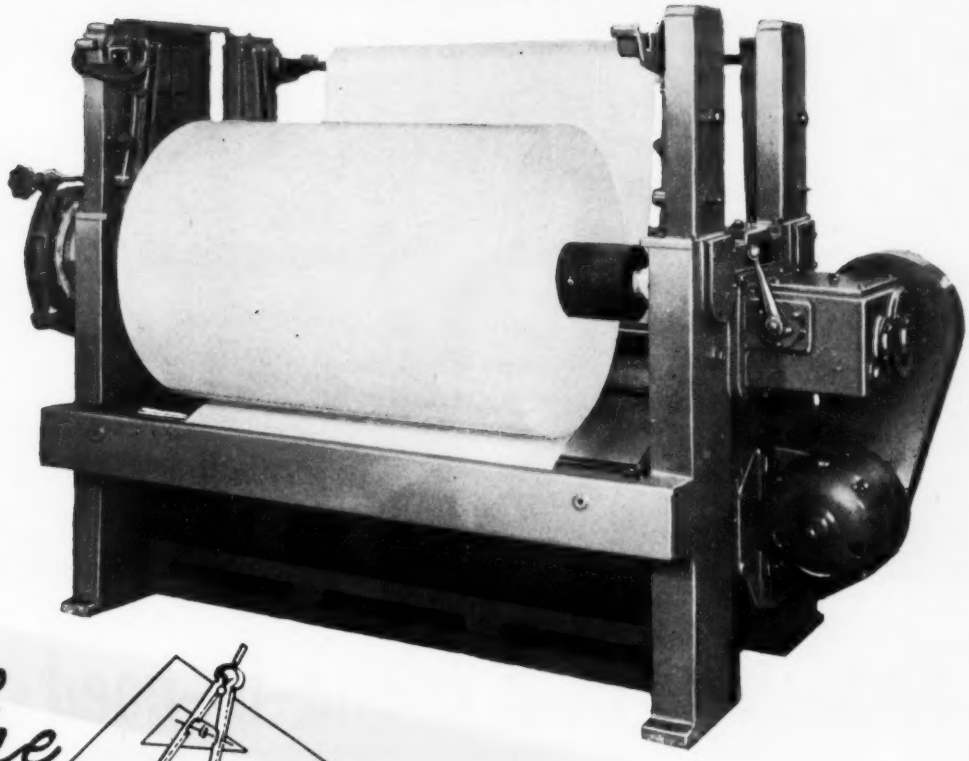
Branches and Wholesalers Serving All Industrial Areas

VALVES • FITTINGS • PIPE • PLUMBING • HEATING

A NEW MASTERPIECE OF JIG DESIGN



The Dyemaster

Van Vlaanderen Engineers—long masters of jig design—have news, important news, for broadgoods dyers. A new jig for ALL FABRICS—cotton, silk, synthetics, blends—is now ready to help you get higher production and better dyed cloth at new savings in maintenance and repair.

This jig is the V. V. DYEMASTER, built to meet the exacting production requirements of American Dyers—a machine with American standards, parts and dimensions.

CONSTANT CLOTH TENSION. Practically none for sheers to full for cotton ducks.

CONSTANT CLOTH SPEED. Evener dyeing from end to end automatically.

"ROBOTROL" AUTOMATIC CONTROL. Starts, reverses and stops automatically.

HYDRAULICALLY DAMPED OSCILLATING EXPANDER ARRANGEMENT. No uneven dyeing due to strains from starts and reverses.

34" BATCH ROLLS. Larger batches than any other, easily and quickly loaded on angle slots with latch lock. Power or regular unloading.

The DYEMASTER is the most versatile jig ever built. Has every Van Vlaanderen patented improvement. Send for new folder giving a detailed description and specifications of this advanced machine.

VAN VLAANDEREN MACHINE COMPANY

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Cable address: Vlaanderen, Patersonnj, U.S.A.

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WORLD'S LARGEST MANUFACTURER OF MACHINES FOR PROCESSING MODERN FABRICS

Handclasp of a friend-in-need

There's confidence in the very "feel" of the world famous C-O-TWO Squeez-Grip Carbon Dioxide Type Fire Extinguishers. The quick-acting "Squeez-Grip" fits your hand naturally like a handclasp... hangs right... carries right... works right. You're in complete command of the situation instantly... no fumbling... no fatigue.

From the non-conducting, shatterproof discharge horn to the high strength, durably finished cylinder, you get top quality construction that results in a lifetime of satisfactory service. Because of the very few working parts and corrosion resistant materials throughout, the total cost to you over the years is less than other initially lower priced makes... fire after fire, recharge after recharge, without trouble.

It's not hard to see, when you fully compare and try, why C-O-TWO Squeez-Grip Carbon Dioxide Type Fire Extinguishers are your best buy for killing flammable liquid and electrical fires, as well as some surface fires involving ordinary combustible materials. Sizes range all the way from 2½ to 100 pounds capacity... all fully approved by the Underwriters' Laboratories, Inc., Factory Mutual Laboratories, Armed Forces and Government Bureaus.

With C-O-TWO Squeez-Grip Carbon Dioxide Type Fire Extinguishers the penetrating carbon dioxide is a clean, dry, non-damaging, non-conducting, inert gas... smothers fire instantly, leaves no after fire mess... harmless to equipment, materials and finishes... even food is still perfectly edible.

Act now for complete free information on these first-rate, sure-acting fire extinguishers. Remember fire doesn't wait ...get the facts today!

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This "Working Heart" assures long life for your LUNKENHEIMER VALVES

Handwheel, stem, and disc . . . these parts are the "working heart" that affects the life of every valve. Lunkenheimer valves are famous for the long, economical service these vital parts give. Take this 200 lb. S.P. "Renewo" Valve, for example:

HANDWHEEL is the new cool-operating "Non-Slip" design that eliminates leakage by enabling the operator to close the valve *tight* with ordinary hand pressure. Four rounded lugs provide a firm grip even when the operator's hands are wet and greasy.

STEM is made of famous "Stemalloy"*, which eliminates stem-thread failure. Amazing exclusive silicon-bronze alloy has exceptional wearing qualities. Millions are in use, and not one has ever been returned due to wear failure.

DISC AND SEAT — 500 BRINELL STAINLESS STEEL — for long, trouble-free service where erosive and corrosive conditions are present. Disc and seat are renewable and can be easily replaced with fullway type seat and disc.

Write for Circular 577, a new bulletin which gives you complete information on the "Renewo" line. And for the finest service on valves, see your Lunkenheimer distributor. The Lunkenheimer Company, Box 360R, Cincinnati 14, Ohio.

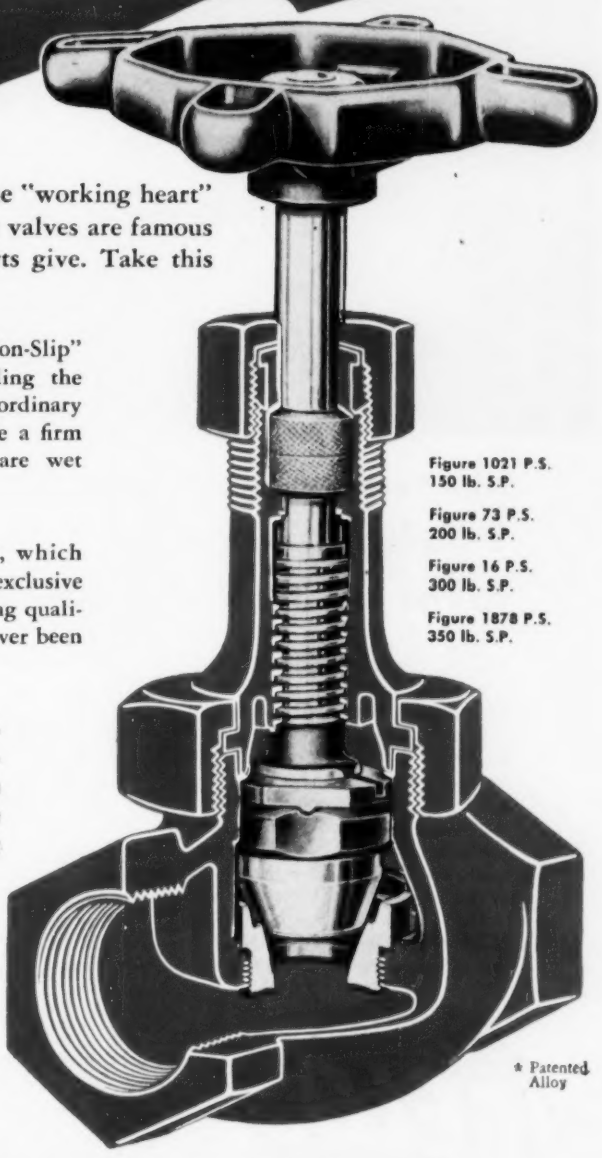

Figure 1021 P.S. 150 lb. S.P.

Figure 73 P.S. 200 lb. S.P.

Figure 16 P.S. 300 lb. S.P.

Figure 1878 P.S. 350 lb. S.P.

* Patented Alloy

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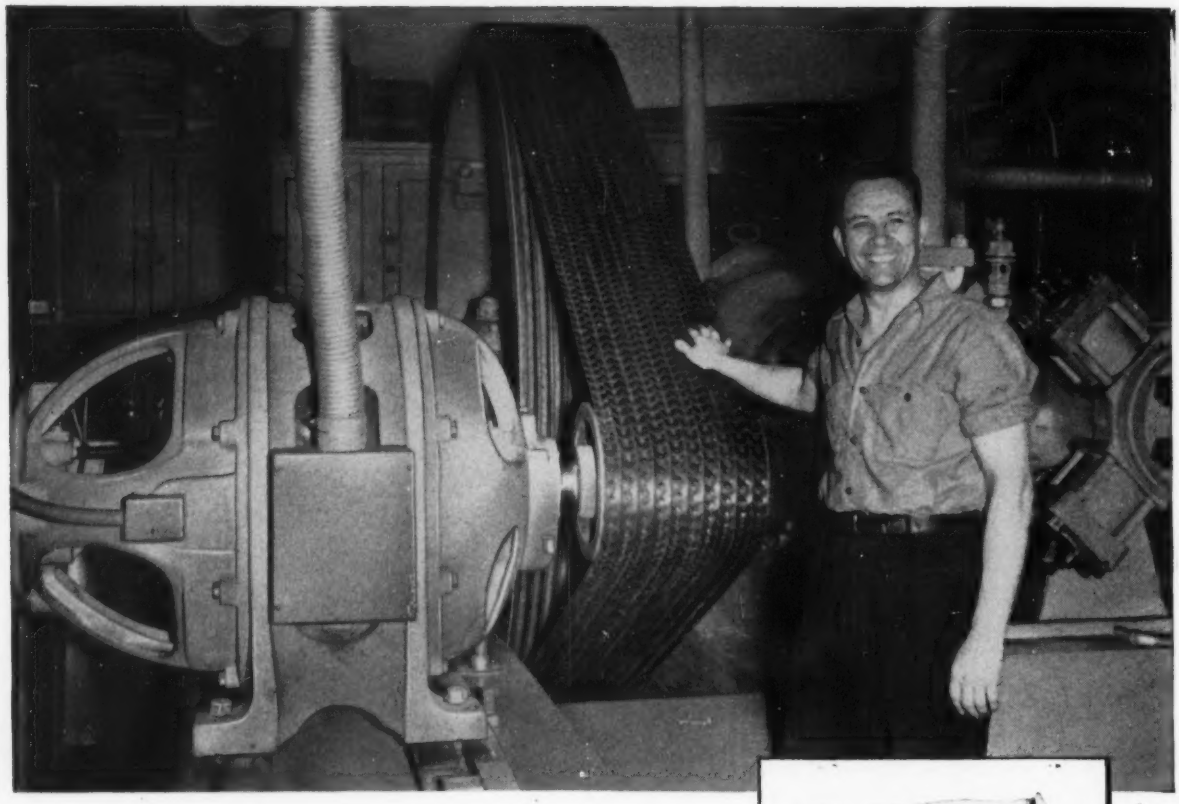

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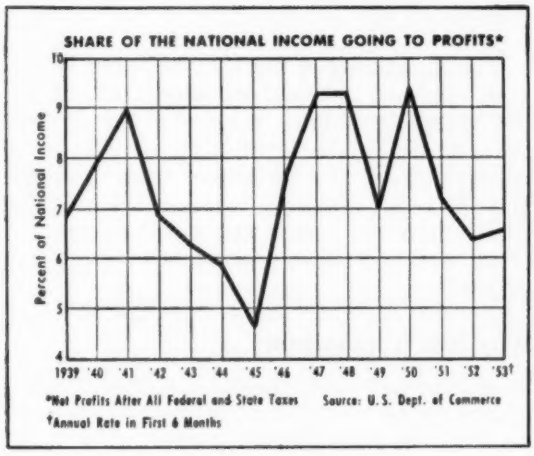
The first of two articles on profits

PROFITS...How High Are They?


SHARE OF THE NATIONAL INCOME GOING TO PROFITS*
Percent of National Income
10
9
8
7
6
5
4
1939 '40 '41 '42 '43 '44 '45 '46 '47 '48 '49 '50 '51 '52 '53†
*Net Profits After All Federal and State Taxes
†Annual Rate in First 6 Months
Source: U.S. Dept. of Commerce

How high are profits? What is being done with them? This is the first of two articles designed solely to throw some factual light on these key economic questions.

One of the important economic developments of 1953 has been a substantial increase in the dollar volume of corporation profits from the level of 1952. But to answer the question "How high are profits?" we must also measure them: 1) by comparison with the record of previous years, and 2) as a share of the total national income. The term "profits," as used here, refers to profits *after taxes*. These are the only profits that can be paid to stockholders or retained for use in the business.

In the first six months of 1953, corporate profits *after taxes* were at an annual rate of $20.4 billion. This was higher than in the first half of 1952, but lower than in the full years 1948 or 1950, or in the first half of 1951. If allowance is made for the declining value of the dollar, this year's net profits for all corporations represent less purchasing power than those made five or six years ago.

Here is the record of profits over the years:

	Net Profits After Taxes of All U. S. Corporations	
	Billions of Dollars	
	Actual	In 1953 Prices
1929	8.4	14.6
1939	5.0	9.8
1947	18.5	22.1
1948	20.7	22.7
1949	16.3	18.3
1950	22.7	24.6
1951	20.1	19.7
1952	18.6	18.7
1953*	20.4	20.4

*Annual rate, first six months

The record shows that real profits have a little more than doubled since 1939. This increase, however, does not mean that corporations are doing exceptionally well. The entire national income has doubled since 1939. And our industrial plant is more than twice as large as it was in 1939. Therefore, profits have just about kept pace with industrial growth.

Return on Investment

How high are profits compared with sales, or compared with the stockholders' investment?

What is the rate of return to the people who have invested their savings in corporate business?

The table below shows that for the past three years the rate of return on both sales and investment has been substantially below the return achieved in earlier postwar years. The rate of return on stockholders' investment is higher now than it was in 1939. But this is primarily because today's profits are reported in terms of today's prices, whereas much of the investment in plant facilities is still carried on the books at prewar prices, which are substantially below the cost of replacement. The current rate of return, measured as a percentage of total corporate sales, is below prewar levels.

	Corporate Profits After Taxes	
	Per Cent of Total Sales	Per Cent of Stockholders' Equity *
1929	6.1	NA
1939	4.1	4.0
1947	5.3	
1948	5.3	14.8 average
1949	4.4	
1950	5.3	
1951	4.1	11.8
1952	3.6	10.3
1953#	3.7	10.8

* Manufacturing corporations only
NA Not available
Annual rate, first six months

In considering these figures, it should be remembered that they are averages for all corporations. Some companies make more than the average, and many make no profit at all. In every year since 1915 at least 25% of all corporations have operated at a loss. In 1939, 58% of all corporations were losing money. This year the figure will probably be at least 30%. The improvement since 1939 shows a much healthier economy. But it does not indicate that profits are easy to make.

How Big a Share of the Pie?

The most important single fact about profits is that they now represent a *smaller* share of national income than they have in past years of normal prosperity. For the past three years, profits have taken a smaller share of the pie than in 1939, and considerably smaller than in the early postwar years. Here, as the chart at the beginning shows, is the record:

	Corporate Profits After Taxes as a Percentage of National Income
1929	9.6
1939	6.9
1947	9.3
1948	9.3
1949	7.5
1950	9.4
1951	7.2
1952	6.4
1953*	6.6

*Annual rate, first six months

The main reason for the declining corporate share of national income is, of course, the increasing share taken by the federal government in the form of taxes. The wage earners' share is also higher than in 1939. But the really startling increase is in federal taxes. Taxes on profits now equal almost 8% of the national income, compared to only 2% in 1939.

Why This Is Important

It is important that these facts about profits and taxes be widely understood. At its next session, Congress must consider what to do about the emergency taxes on profits enacted after the outbreak of the Korean War. The so-called excess profits tax is scheduled to die on January 1, 1954. In the absence of new legislation, the rate of the corporate income tax will drop from 52% to 47% on April 1. Many factors, including the revenue needs of the government, must enter into the decision whether or not to reduce taxes. But one fact stands out clearly: By comparison either with past years or with the total national income, corporate profits today are relatively low.

* * *

The second article in this series will discuss what corporations do with their profits.

McGraw-Hill Publishing Company, Inc.

This Year–

- **Mills Spend for Improvement Rather Than Expansion**

  The surge of new-mill building in the South slowed down in 1953, as mills channeled their expenditures more toward improvement than expansion. The breakdown of mill expenditures by industry branch, which starts on p. 100 of this issue, shows which types of mills are now making the larger proportionate improvement.

- **New and Improved Equipment and Supplies Blanket All Types of Mills**

  New machinery, equipment, and supplies announced during the last 12 months are reviewed starting on p. 102. As will be seen in this section, progress, as evidenced by more-efficient processing equipment and aids, touched every major branch of the industry. Mills planning expenditures in 1954 will find here a "showcase of progress."

TEXTILE WORLD

Presents–

ANNUAL MILL CHECK-UP

SECTION

NOVEMBER, 1953

1953 Spending Goes Heavily

▶ **A higher share of expenditures for mill improvements and a lower share for new building was the mill-expenditures pattern this year. As usual, cotton mills led the industry**

▶ **Highlights of the year's activity include—**

- **Cotton-spindle activity up 15%**
- **Fiber consumption up 8%**

▶ **Amazing 300% gain in productivity since 1920 shows progressiveness of mills and machinery manufacturers**

By P. M. THOMAS
Editor, TEXTILE WORLD

and THOMAS B. WINSTON
Assistant Editor, TEXTILE WORLD

COTTON-SYSTEM MILLS led the parade in 1953 in mill expenditures for new plant and equipment, with woolen and worsted mills in second place. With total expenditures and commitments estimated at $323-million, 1953 stands as the seventh all-time-high year, indicating that the textile industry is still going ahead with its program of improvement.

Expenditures and commitments by different branches of the industry this year were:

Cotton mills	$128,362,000
Woolen and worsted mills	74,725,000
Synthetics mills	53,984,000
Knitting mills	33,307,000
Finishing plants	32,889,000
	$323,267,000

Although these figures are down from those of last year, by far the major share of the decrease is accounted for by a letup in new-mill building. For the three preceding years, many millions of dollars included in our annual expenditures figures went for land and buildings, primarily because of the new mills being built in the South. This year, new-mill building has been quieter; hence, the millions of dollars spent in recent years for new buildings are largely lacking in this year's figures.

Woolen and worsted mills, spending $75-million, against $80-million in 1952, kept their expenditures nearer the 1952 level than any other branch of the industry.

Finishing plants, investing $33-million this year, compared to $37-million last year, were second in holding their level of expenditures up near last year's level.

Cottons mills, leading in total expenditures, spent or committed $128-million, compared to $200-million in 1952.

Knitting mills invested $33-million this year, compared to $59-million last year.

Reflecting an important drop in new-mill building, synthetics mills spent or committed $54-million, against $197-million in 1952.

Mill Production Up

Both cotton-spindle activity and fiber consumption are up from last year.

Up to September of this year, cotton spindles in the United States operated at 134.1% of capacity, compared with 118.7% of capacity during the same period last year—a gain of 15.4%. (Data from U. S. Dept. of Commerce.)

Fiber consumption was up 8% over last year, with the gains distributed as follows: cotton 5%, wool 23%, and rayon and acetate 10%. These gains give this

for MILL IMPROVEMENTS

fiber-consumption picture for years since 1946: the rate of cotton consumption for the first seven months of 1953 was higher than for any year except 1951; wool consumption for the first six months was at a higher rate than for any year except 1947, 1948, and 1950; rayon and acetate consumption was at a higher rate than for any year except 1950. (Data based on figures from *Textile Organon.*)

Yarn and cloth inventories held in mill warehouses are reported to be only about half as large as they were last year, and several constructions of goods are already sold well into 1954.

Korea now seems about out of the textile picture. The consumer inventories built up in late 1950 and early 1951 have been worked off to a normal level, and this year government defense spending for textile products slipped to 5% of fiber consumption from 6½% in 1952.

Inventories of supplies, however, are still thorns in the sides of some mills. Scare buying in the early months of the Korean War loaded mills with supplies of all sorts; and supplies with a fairly long life—bobbins, shuttles, drawing cans, doff boxes, etc.—are still in long supply in many mills.

However, at this year's increased rate of mill production, this overload of supplies will be worked off more rapidly than usual. Supplies with a shorter life or that present a storage problem—starch, finishing materials, lubricants, etc.—have already been worked down to a comfortable supply-and-demand basis.

Productivity Shows 300% Gain

TEXTILE WORLD figures now available for the first time give a clear idea of how textile-mill efficiency is increasing. Productivity, measured in terms of pounds of fiber consumed per production worker, increased over 300% in the 31 years 1920-51. This is an amazing record. Few, if any other industries can match it.

Figures for five-year intervals, except the war year 1945, are:

Year	Fiber per worker
1920	2,020 (lbs.)
1925	2,259
1930	2,054
1935	2,115
1940	4,400
1950	5,580
1951	6,230

This record is a tribute to mills and to machinery and supplies manufacturers who poured time, thought, and money into the project of lifting the textile industry from the "baling-wire" level of the 1920s to its present high level.

What About the Future?

In the May issue of TEXTILE WORLD, we discussed the future pattern of mill spending. We stated then that for the next few years mills would spend a higher percentage for improvements and a lower percentage for expansion. The estimated figures for improvements to present mill capacity were:

1952	70 (%)
1953	83
1954-5	89

This year's spending by mills reflects that trend. It is almost certain that next year will see a continued swing from expenditures for building to expenditures for mill improvements.

Therefore, the review of machinery and equipment announced during the last 12 months, which we present in this issue, probably is more timely and valuable than in any previous year we've presented it. Here, in a few pages, is a quick look at the latest improvements that can help mills to continue their march toward better and better productivity.

1953 Review of New Equipment

1. Yarn production 100
2. Twisting, winding, warping, and slashing 109
3. Weaving 114
4. Knitting 117
5. Wet processing and finishing 119
6. Accessories and supplies 123
7. Materials handling 126
8. Regulating, controlling, measuring, and testing 128
9. Air conditioning and heating 133
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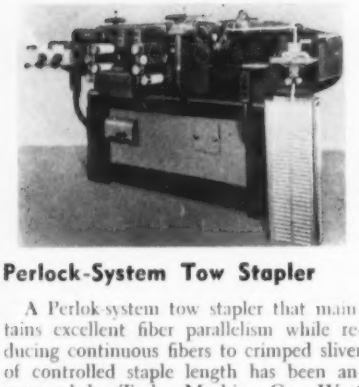
TO REQUEST FURTHER INFORMATION on any item described in this review, please use the Reader-Service card on p. 187. Refer to the number following each description.

1 Yarn production 1



Perlock-System Tow Stapler

A Perlok-system tow stapler that maintains excellent fiber parallelism while reducing continuous fibers to crimped sliver of controlled staple length has been announced by Turbo Machine Co., West Main St., Lansdale, Pa.

The machine offers great flexibility in choice of fiber, staple length, and yarn characteristics.

The sliver produced can be processed into uniform yarns in five steps: one open-drawing operation (10 doublings), one pin-drafting or gill-reducing operation (three doublings), a roving operation, and double-creel spinning.

The tow is pretensioned before entering the back rolls and then heated if necessary.

After the continuous filaments have been pretensioned to remove the crimp and to insure an even feed to the breaking zone, a draft of 2 to 8 is applied in the breaking zone.

At the same time, the fibers are thrown out of their normal path by abrasive edges and are broken into staple lengths. Adjacent fibers therefore do not necessarily break at the same point or to the same exact length.

A vacuum system operates over the breaker bars to remove the fly made during the breaking process.

After leaving the front rolls, the fibers enter the crimper, where varying kinds of crimp can be set in again.

(N-1)

Whitin Introduces Superdraft Frame for Worsteds, Synthetics

A new Superdraft roving frame for the processing of worsted, synthetic, and blended fibers in lengths from 2 to 7 ins. has been developed by Whitin Machine Works, Whitinsville, Mass. It has been named the Model G10D Superdraft frame.

One important feature of the new frame is the inclined (30° angle to the roller beam) roll stands. This arrangement allows for easier cleaning of rolls, cradles, saddles, and aprons of the drafting assembly and closer twisting up to the nip of the front rolls of the roving in process.

The inclined roll stand stands higher above the roller beam than the roll stand of previous models of frames. The center of the bottom front roll is 6 ins. above the roller beam.

The drafting zone is divided into two fields. Over-all back-to-front roll spread extends up to 14 ins. Bottom-roll diameters, from back to front, are 1¼, 1½, 1, and 2 ins. Top-roll diameters, from back to front, are 1¾, 1¾, 1, and 2½ ins. Top rolls are Climax ball-bearing synthetic-covered rolls. All four lines of bottom rolls are equipped with antifriction bearings.

(N-2)

New Spinning Frame Has Builder Motion in Head End

A new ring spinning frame that has adjustable 1½-in.-dia. steel samsons that allow a traverse range of 8 to 11 ins. has been developed by Textile Equipment Corp., subsidiary of W. D. Dodenhoff Co., Inc., Greenville, S. C.

Design of the top and bottom roll assemblies provides for drafting adjustment up to 2¾-in. staple length, with gauges of 3, 3½, 4, and 4½ ins. possible.

The antifriction top rolls are individually spring weighted and suspended from the top arm. A snap-action release allows each arm to be raised independently for ease in cleaning, for removing lap-ups without cutting, and for taking rolls out. No cap bars or nibs are used.

The draft range is from 10 to 60. Twist range is from 10 to 80. Silent chain and helical gears are used throughout the drive; so there is no backlash on starting up the frame. The gearing mounted on sealed ball bearings is readily accessible and requires only one wrench to adjust any gear or bracket.

A sump-pump system of continuous

lubrication is in the head-end housing. With the exception of the bottom fluted roll, lubrication is not required more than once a year.

An umbrella-type creel is used with top-suspension bobbin holders. Antifriction spindles are included as standard equipment. The frame can be adapted to any air-suction system in place of the scavenger rolls.

(N-3)

Control Rolls on Card Minimize Plucking

New control rolls, used singly with mote knives in carding cotton and in tandem without mote knives in carding synthetic fibers, have been developed for revolving-flat and roller-top cards by Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass. Application of the new rolls to cards practically eliminates the defects in sliver caused by plucking by the lickerin.

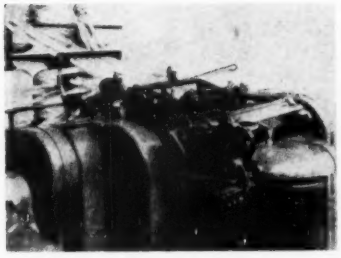
A wire-wound roll is placed directly below the nose of the feed plate and revolves in the same direction a bottom feed roll would. The teeth in this roll point in the opposite direction to its rotation. The feed plate is then adjusted 0.035 to 0.050 in. from the lickerin instead of the usual 0.010 or 0.012 in. The new control roll is set 0.007 to 0.010 in. from the lickerin and is rotated at a surface speed 10 to 15% faster than the feed roll.

Fibers up to 4½ ins. can be run successfully when these rolls are applied to a card with three sets of workers and strippers.

On Saco-Pettee or Saco-Lowell cards, it is necessary to drill one hole in the card side for the drive and two tapped holes in the shelf to apply the driving bracket. The brackets fit on right- or left-hand cards.

These rolls can also be applied to other makes of cards.

(N-4)



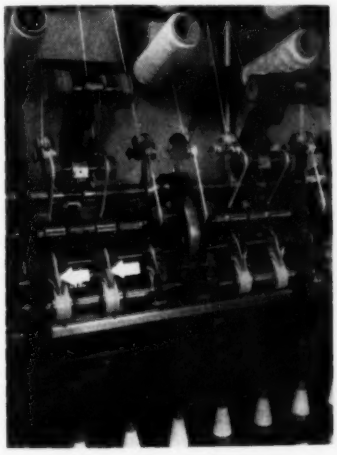
Improved French Comb

A new-model French-type comb that can handle short wools of varying staple length has been made available by Prince-Smith & Stells Ltd., c/o Blake Electric Mfg. Co., 43 Commercial Wharf, Boston 10, Mass.

Improvements over previous models are:

1. A wedge-type nip form
2. A shortened distance from the nip to the pins
3. A heavier nip shaft
4. Spring weighting of the nip
5. A new shovel plate to feed the slivers to the nip
6. Ball-bearing feed grid
7. New top roll pressure adjustment
8. Rounded-tooth flutes on the draw-off roll
9. Reduction of roll and apron widths to 19¾ ins.

(N-5)



Direct Spinner Spins Yarn From Nonplastic Filament Tow

A tow-to-yarn direct spinner has been developed by Société de Constructions Mécaniques de Stains, 81 Avenue Aristides Briand, Stains, (Seine), France. The machine spins staple-synthetic yarns, 9s to 105s on the cotton system, from any type of nonplastic filament tow between 2,000 and 8,000 den.

After passing through weighted holding rolls, the tow is stretch-broken in the drafting area as it passes at a slight angle over a prismatic-shaped roll with blunt cutting edges. The sliver passes to a revolving-apron and condenser area where the filaments are kept parallel until they are gripped by the front drafting rolls. The yarn is then pulled down to the bobbin and twisted by a ring and traveler.

Two standard machines are available: a 3.9-in.-gauge, 2.56 in. ring-diameter, ½ lb.-package unit with a maximum of 288 spindles; and a 2.9-in.-gauge, 1.77-in.-ring-diameter, 1/5-lb.-package unit with a maximum of 320 spindles.

Further information is available from Pierre Kaltenbach, 25 Vanderbilt Ave., New York, N. Y.

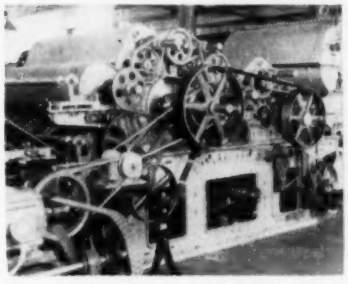
(N-6)

New Swiss Tow Cutter

Staple that can be drafted in subsequent processes is made on a new tow converter that has been developed recently by Johann Jacob Rieter & Co. Ltd., Winterthur, Switzerland.

Outstanding features are (1) over-all length of 17 ft.; (2) 3½-ft. width; (3) delivery speeds of 45, 65, or 90 yds. per min.; (4) draft of about 15; (5) resultant-sliver weight of 150 to 220 grains per yard; (6) production rate of 125 lbs. per hr.; (7) cutting rolls for from 2½- to 6½-in. staple length; and (8) a coiler assembly that is adjustable for from 12- to 16-in. cans.

(N-7)



High-Speed Garnett Processess 575 Lbs. per Hr.

A simpified garnett for high-speed processing of cotton, jute, and synthetic fibers has been developed by James Hunter Machine Co., North Adams, Mass. The Model 40 is designed to increase production and reduce operating and maintenance costs.

Quality production as high as 575 lbs. per hr. is reported on some fibers.

There is just one worker and stripper for each cylinder; so there are fewer rolls to spindle out and reclothe and fewer bearings and poppets to replace.

Balanced rolls, running on ball bearings, eliminate gauging troubles. Feed rolls are equipped with Oilite bushings that require no lubrication.

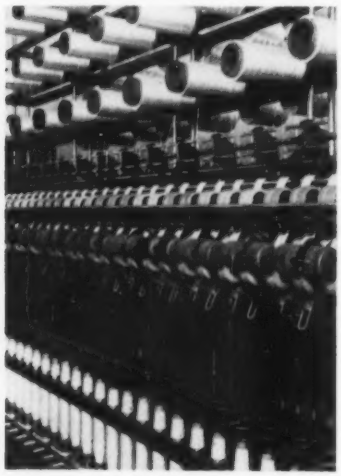
High production is obtained from a

larger-diameter worker, a stripper, and an additional high-speed fancy on the finishing cylinder—all revolving opposite to the main cylinder. The three high-speed fancies provide the extra carding necessary to increase production satisfactorily without hurting quality.

Short-fiber stock is successfully handled through the elimination of slow-speed worker cylinders, which tend to tear shorter fibers. Tests to date show it is possible to run card sweeps, picker waste, fly motes, and linters.

A slightly modified version, Model 40 S, is designed for synthetic fibers.

(N-8)



Direct Spinner Takes 1,000- to 6,000-Den. Tow

A new direct spinner that incorporates a cutting apparatus in the drafting field to replace the "cracking" method hitherto used is now available from Johann Jacob Rieter & Co. Ltd., Winterthur, Switzerland.

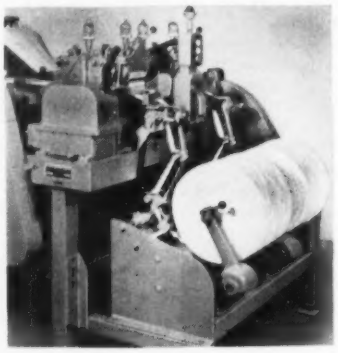
The cutting and drafting arrangement of the new Cutdrafil machine—which has movable spindle rails, broken-end extractors, and a compressed-air front-rail pressure system—consists of pairs of front and rear gripping rolls and intermediately disposed cutting rolls that sever the tow passing through.

The drafting arrangement can be adapted to the varying characteristics of raw materials being processed. Yarns can be produced with a maximum total shrinkage of only about 5%.

The new frame is capable of handling tow ranging from 1,000 to 6,000 den., with individual filaments ranging from 1 to 6 den. Drafts from 4 to 60 are possible.

The cutter adjustment permits the production of staples ranging from 2 to 6 ins. The machine can handle any synthetic material. The usual range of yarn numbers is from 20s to 60s (cotton yarn number.)

(N-9)



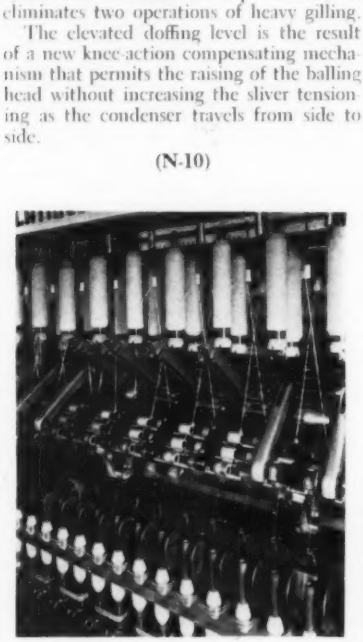
Improved Balling Head Doubles Pin-Drafter Capacity

A boost of more than 100% in sliver-processing capacity and large-package, 28-in. high doffing are the result of design refinements in the Warner & Swasey Co. (5701 Carnegie Ave., Cleveland, Ohio) balling-head pin drafter. Special heavy-duty faller bars and a deep-fluted inner nip roll raise the machine's capacity to 2,400 grains-per-yard maximum entering weight per head. Delivery capacity is 3½ oz. per 5 yds., or 306 grs. per yd.

The double-meche unit delivers two 1¼ oz.-per-5-yd. slivers to each ball. This extension of capacity suits it for use by dyers and commission top makers; it eliminates two operations of heavy gilling.

The elevated doffing level is the result of a new knee-action compensating mechanism that permits the raising of the balling head without increasing the sliver tensioning as the condenser travels from side to side.

(N-10)

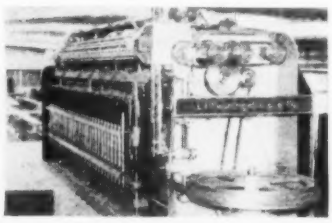


Italian Cotton Frames Feature Easy Draft Change

A line of cotton spinning and twisting frames available from Stellite American Corp., 60 E. 42nd St., New York 17, N. Y., has 320 to 500 spindles per frame. Spindle speed is from 4,675 to 11,250 rpm. Gauge is 2¼ to 4 ins. with 1¼ to 2¾-in. ring diameters.

Features of the machines are: a gear box that has only a lever to be moved to change draft, a patented swinging arm for lifting the top drafting rolls out of the way, an improved LeBlanc-Roth high-draft assembly, one driving tape to every four spindles, constant-size balloon during the building of the entire bobbin, tachometers for determining spindle and roll speed, and variable-speed motors.

(N-11)



Direct-Spinning Machine Has No Spindle-Tape Drive

A two-level 60-spindle spinning frame that spins cotton direct from drawing sliver has been announced by Joseph Pfenningsberg & Co., M. Gladbach, Germany. In addition to high drafts up to 130, the standard spindle-tape drive has been eliminated.

The spindle-drive is an endless belt that circles both ends of the frame in an enclosed area and drives the spindles directly through vertical tension rolls.

The drafting system of the frame is set up at an angle of 55°, which is said to be a very favorable angle for spinning. It is a five-roll drafting unit with a single apron, and it is provided with modern pendulum-type saddles that need no lateral guidance.

The frame is suitable for large bobbins and cops up to nearly 12 ins. long. The standard frame has a 3 7/16-in. spindle gauge with 2⅜-in. rings, or a 3½-in. spindle gauge with 2 7/16-in. rings.

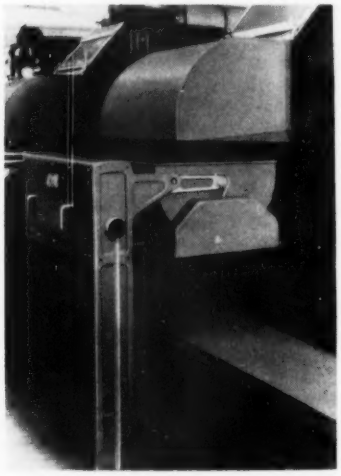
(N-12)

Z-5 Drafting Element Made for Spinning Frames

An improved drafting element for spinning frames has been developed by Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass. The Z-5 component handles

staple lengths from 1 to 5¾ ins. An auxiliary apron bar between the middle roll and standard apron bar supports the apron for wider settings. Small diameter slip rolls allow a close setting of the apron bar to the front rolls. Two slip rolls are used for settings 3 to 5¼ ins.; the shelf is taken out for settings from 4 to 5⅛ ins.; and three slip rolls are used for settings from 5¼ to 6 ins. Two lengths of saddles are provided.

(N-13)

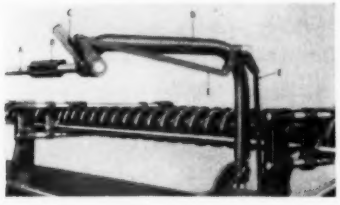


Weighing Unit Blends Bale-Breaker Deliveries

A weighing unit for blending bale-breaker deliveries onto the feed belt has been developed by Platt Bros. & Co. Ltd., Oldham, Lancashire, England. A unit attached to each bale breaker drops its load of stock on the belt when the hopper is filled to a pretermined amount. The weight of the stock is controlled within 1½% accuracy by a beam balance, which can be regulated in 1-oz. increments. The amount of stock can be set from 8 oz. to 4 lbs.

If one of the units fails to deliver, all units are automatically stopped.

(N-14)



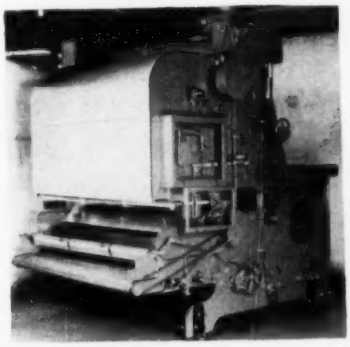
New Shipper Rod for Roving Frames

A new roving-frame shipper rod has been developed by Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

An easy turn of the wrist controls the movement of a switch and makes it easy to jog a frame in putting up ends or preparing to doff.

The new shipper-rod motion is standard on new frames and can also be applied to existing frames without alterations or excessive machining.

(N-15)



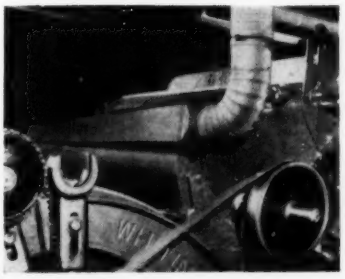
Bramwell Feeder Has Variable-Speed Apron

A Bramwell feeder that gives uniform weighing regardless of the amount of stock in the hopper has been put on the market by George S. Harwood & Son, 50 Lagrange St., Worcester 8, Mass. Known as the Type G, it has electrical controls, a feeder plate that gauges the quantity of stock lying in the hopper, and automatic regulation of the speed of the spike apron to compensate for changes in quantity in the hopper.

An automatic catch pan keeps surplus stripping from dropping on the apron.

Other features of the feeder include oil-impregnated bronze and frictionless bearings, sheet-metal covers and panels, and transparent guards over the scale-operating mechanisms.

(N-16)



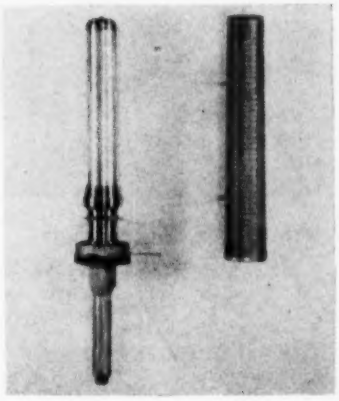
Wool-Fancy Exhaust System Allows Higher Cylinder Speeds

A fancy cover manufactured by Whitin Machine Works, Whitinsville, Mass., for its woolen cards is shaped to control air currents and pipe away any fly resulting from high cylinder and fancy speeds. The cover is adjustable to give a close fit to the adjacent worker roll, and gauging of the fancy-roll settings is possible without raising the hood. The connecting piping slips off to allow the cover to be raised and pivoted back on slotted brackets when necessary.

From each card the lint travels to a dampered main duct, usually located overhead, from where it is exhausted through a fan to a collector over the feeder hopper or directly into the stock bin.

With the new waste-exhaust system, 60-in.-dia. woolen-card cylinders can be run as high as 100 rpm. Production increases up to 20% are possible, less cleaning is necessary, and the roving produced is evener than usual.

(N-17)



Paper-Tube Spindle Holds From 19 to 26 Oz. of Yarn

A new antifriction ball-bearing spindle for use with paper tubes has been developed by Davis & Furber Machine Co., North Andover, Mass. The spindle is equipped with a footstep dampening device that requires lubrication only every two years.

Bobbins are gripped by centrifugal force and are evenly seated. The spindle has a finger-operated brake, which stays on until released; so piecing up is easy for the operator.

No important changes are necessary on present spooling, dressing, and winding equipment to accommodate the new bobbin. The package is 13 ins. long with a 12-in. traverse. Yarn weight per bobbin varies from 19 to 26 oz., approximately twice as much as on an ordinary bobbin.

(N-18)

Grease-Sealed Top Rolls Have Three-Year Guarantee

A new line of top rolls, which will be replaced free within 90 days and which are guaranteed for three years, has been announced by Cole Engineering Corp., Columbus, Ga.

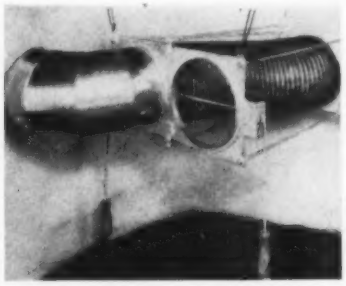
Each cot and cylinder in the new line

is supported on the shaft by a pair of needle bearings. The grease seals are tight to fluid, air, and lint; and there is a liberal grease reservoir between bearings. Provision has been made for regreasing without disassembly.

The roll's cots are applied on a split core that snaps into place to assure steady running and concentricity, but cots can be removed quickly for rebuffing or replacement.

No alterations in cap bars or saddles are necessary to install the new rolls.

(N-19)



Switch Diverts Piped Fibers

A raw-stock overhead-line switch for use in woolen and worsted mills to control the flow of raw stock to the cards has been put on the market by Benoit Mfg. Co., Box 112, Charlton City, Mass.

It consists of a metal frame that encloses a length of flexible tubing and is suspended from the ceiling of a building to connect the main supply lines of stock.

(N-20)

Detachable Plastic Skewer For Card-Room Bobbins

A plastic skewer base has been developed for 8- to 11-in. card-room bobbins by Monticello Bobbin Co., Monticello, Ga. It measures 1⅛ ins. dia. and can be screwed onto wooden skewer barrels whose bases are chipped or split. No change has to be made in conventional creel boards to take the plastic bases.

The screw has a left-hand thread so that base and skewer cannot become separated as stock is drawn off the bobbin.

(N-21)

Metallized Ceramic Thread Guides

AlSiMag thread guides with specific areas metallized for attachment by soldering are announced by American Lava Corp., Cherokee Blvd., Chattanooga 5, Tenn. The new development makes possible the firm attachment of small ceramic inserts in places where a smaller guide can increase production speed.

(N-22)

Flyer-Balancing Machine

An electrically driven turntable head, a calibrated reading panel, and brakes are the components of a German flyer-balancing machine available from Roman Hofmann, 4 Labornum Rd., Davyhulme, Manchester, England. The flyer reveals its direction of unbalance as the brake is applied, and the area causing the unbalance is then marked on the flyer with the aid of the angular degrees engraved on the head of the tester. Corrections in balance are made by bending the flyer and testing again.

(N-23)

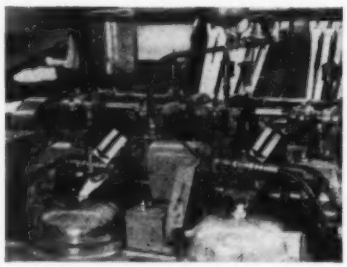
60-In. Cylinders Clothed in 15 Mins.

A new power winch developed by Davis & Furber Machine Co., North Andover, Mass., rotates main cylinders and doffers when new card clothing is being wound. With a new unit of this type, at least two men are released for duty elsewhere; so the labor cost of winding card clothing is halved.

The machine makes it possible for two men to wind a 60-in.-wide cylinder in 15 mins. The rest periods ordinarily necessary during winding by hand are eliminated.

The winch, 14 ins. wide, is portable. Shafts with centers from 17 to 45 ins. above the floor can be driven.

(N-24)



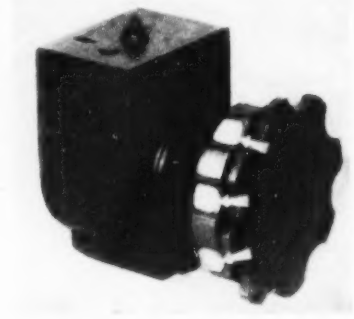
Sprayers for Pin Reducers

A duplex metering pump and controlled-spray applicators for use on pin drafters and gill reducers were recently developed by Bachmann Uxbridge Worsted Corp., Uxbridge, Mass. They are now available from Bullard Clark Co., E. H. Jacobs Northern Div., Danielson, Conn., and Southern Div., Charlotte, N. C. The system is an improved way of applying oil, tints, or moisture in controlled amounts to fibers in process.

The spray is applied directly above each coiler head. (See arrows).

Filtered liquid is supplied from a bottle mounted on its own floor stanchion through two metering pumps driven by a nonslip chain drive operating from the pin-reducing machine. Spray nozzles, using low-pressure air, are mounted behind the drafting area or in special housings above the coiler heads. The pumps start and stop with the machine to eliminate dripping. Automatic air control is also available.

(N-25)



Card-Flat-Chain Lubricator Eliminates Bucked Flats

A card-flat-chain lubricator designed to keep the flat chains of most makes of cotton cards oiled has been developed by W. G. Jarrell Machine Co., 1200 S. Mint St., Charlotte, N. C. The lubricating unit is attached to the card side at the chain and works while the card is being ground. Felt pads meter oil to the chain with each revolution of the lubricating sprocket.

Enough oil is dispersed during a 7-hr. grinding job to lubricate the flat-driving chain just enough to eliminate bucking flats.

(N-26)

Improved Blender Tints and Sprays Oil

A new stock blender has been developed by Grover C. Truslow, 315 Boone Road, Leaksville, N. C.

The machine has an arrangement for tinting stock or adding fugitive dyes and a patented oil- or emulsion-spraying system.

Thousands of pounds of stock can be run through the machine into a bin in one batch, and each batch will be well mixed.

The new unit should be valuable in mills that use large quantities of wool and in modern garnetting and waste-fiber handling mills.

Asbestos fiber, perhaps the most difficult to blend properly because it is heavier and clings, is blendable into good stock for good yarns with this unit, with cotton as the carrying agent.

(N-27)

This Device Snaps On 50 Travelers per Min.

An automatic device for snapping travelers on rings has been made available through Rodger L. Simons, 50 Broad St., New York 4, N. Y. The device, patented by Francois Bobek, Golbey, France, snaps travelers on 500 rings in 10 mins.

The travelers are automatically brought into position through the tubular magazine and are snapped over the rings by a push on the right-hand lever. Neither the traveler nor the ring is damaged.

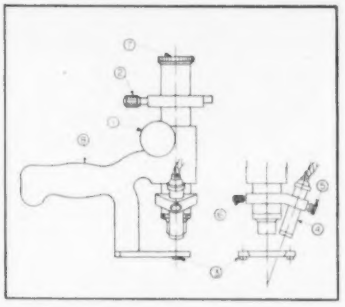
Models are available for small, medium, and large travelers.

(N-28)

Needle-Bearing Top Rolls

A new type of antifriction top roll that uses free $\frac{3}{32}$-in.-dia. bearings, with the lubricant sealed in, has been developed by Precision Rolls Co., Box 5087, Columbus, Ga. Rolls are guaranteed for three years. Provision has been made for regreasing, without disassembling the rolls, on a once-a-year schedule.

(N-29)

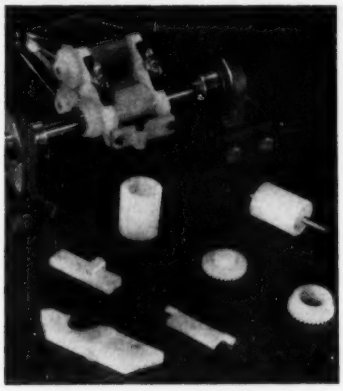


Microscope To Set Cards

With a new portable viewer now available from Toyoda Automatic Loom Works Ltd., Kariya near Nagoya, Japan, an inexperienced man is now said to be able to set cards accurately.

Settings can be made even while the card is running, the manufacturer says.

(N-30)



Nylon Elements for Spinning

Trial production of long-draft spinning units in which 13 nylon parts are used has been undertaken by Macdonald & Sons, Inc., Box 706, Providence, R. I. Advantages of the nylon components are elimination of oiling and longer wear life.

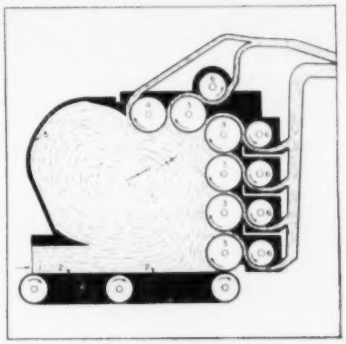
(N-31)

Saddle and Top-Roll Assembly

A saddle and top-roll combination, introduced by Dixon Lubricating Saddle Co., Bristol, R. I., eliminates oiling and reduces power consumption in the drafting sections of spinning frames. The assembly uses Rulon as a bearing material.

The new front-saddle-and-roll combination, exclusive of cots, is priced at 40¢ per spindle (3-in. gauge). As a tryout, the manufacturer offers to equip one side of any spinning frame with the new front saddles and rolls with no charge or obligation to the mill.

(N-32)



SRRL Lint-Cotton Opener Improves Stock Evenness

A lint-cotton opener developed and patented by the Southern Regional Research Laboratory in New Orleans, La., gives improved evenness in subsequent processing and improves the quality of finished fabrics. It is being manufactured by Carolina Machinery Co., Inc., 5019 Wilkinson Blvd., Box 1922, Charlotte, N. C.

Here's how the opener works:

1. Lint cotton is fed in at the lower left.
2. An endless lattice apron carries the lint in to the five new cylinders.
3. The 12-in.-dia. saw cylinders gently open a small portion of the cotton at each revolution. Each cylinder has 265-tooth, 2-in.-pitch saws that oscillate slightly to provide complete coverage.
4. A "kicker" cylinder helps keep the mass moving smoothly.
5. A smooth, curved metal sheet assists in the rotating action.
6. Five 9-in.-dia. doffer cylinders strip the opened lint from the saw cylinders and carry it to the lint tubes.
7. Two lint flues carry off the opened fibers.

The openers are made in two sizes. The smaller requires a 4½x8-ft. floor space; the larger, a 6x8-ft. floor space.

(N-33)

Spinning-Twisting Spindle Is Smooth Running

A new roller-bearing spindle made in Switzerland by Spindles, Motors & Machines Ltd. is now available from Gubelin International Corp., 35 W. 53rd St., New York 19, N. Y.

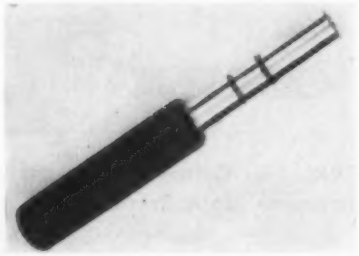
The SMM roller-bearing spindle embodies two unique features: a universal joint and an oil-damping device.

The universal joint consists of a number of flexing bars and is practically rigid in the direct radial direction but yields gently in the swiveling directions to take up the oscillating movements originating from any lack of bobbin balance. Swiveling is effected without friction.

The patented damping device consists

of a number of tubes with specially rounded bottoms. The lubricating oil fills all interstices. The oscillating movements of the upper part are transmitted through the foot of the shaft to the bearing tube and, from there, to the tubes with the oil between them.

(N-34)

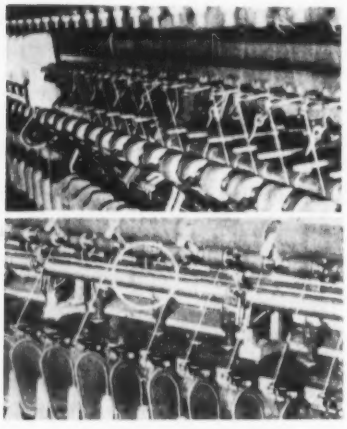


Plug Gauge Tests Plain-Bearing Spindle Bolsters

A plug gauge for determining whether bolsters for plain-bearing spindles are worn sufficiently to be discarded has been announced by Whitin Machine Works, Whitinsville, Mass. The gauge has a shaft with a diameter the same as the original diameter of the spindle bearing and a second section that forms a shoulder.

If the gauge goes far enough into the bolster to pass the grooved limit line, the bolster can be considered worn out.

(N-35)

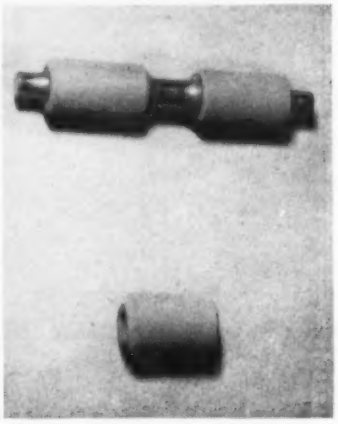


Improved Cot Runs Longer

A new synthetic-rubber cot that cuts down on eyebrowing has been developed by Dayton Rubber Co., Riverview Ave., Dayton 1, Ohio.

The cot is designed with the coefficient of friction that is best suited to yarn manufacturing. Less picking of cleaner boards or rolls is necessary because short fibers are removed and transferred under the clearer boards while the longer fibers, which ordinarily build into eyebrows, continue on in the yarn.

(N-36)



Synthetic Top-Roll Covering

A new synthetic top-roll covering has been announced by Coleman Co., Inc., Box 3597, Greenville, S. C. The new product, manufactured by B. F. Goodrich Co. exclusively for the Greenville firm, is known as the Tru-Draft cot.

Cots are available in several compounds designed for use with cotton and other fibers. One type is said to be especially effective in eliminating eyebrowing in installations where flat clearers are used. Another is designed for use on revolving or oscillating clearers.

(N-37)

Composition Rub Apron Raises Condenser Production

A new composition condenser apron that resists oils and stains, increases rubbing efficiency, makes it possible to put more roving on each jack spool, and permits longer runs between doffs on spinning frames, has been put on the market by Boston Woven Hose & Rubber Co., Box 1071, Boston 3, Mass.

The new fabric-reinforced apron increases condenser production up to 25% or more, increases jack-spool capacity 20 to 30% by weight because of the denser roving produced, and is good for several years of continuous service.

With the improved rubbing results obtained from the apron, condensers can be run up to 30% slower than is usual. Card and condenser maintenance costs are thus reduced.

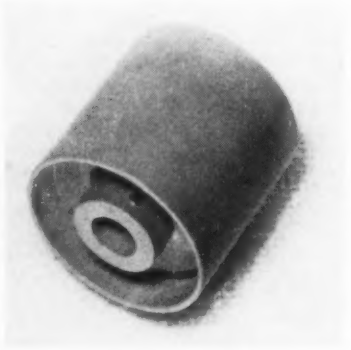
(N-38)

Roving-Bobbin Stripper

A 12-bobbin roving-stripping machine that uses no knives or draw-off rolls has been made available to American mills by M. Mannhart Ltd., Bacch (Sz.), Switzerland.

Bobbins are stripped at high speed by air suction through two metal tubes that lead to a collecting box (on wheels) located between the four legs of the stripper. The stripped waste can thus be returned to the picker hopper or card feed without further handling.

(N-39)



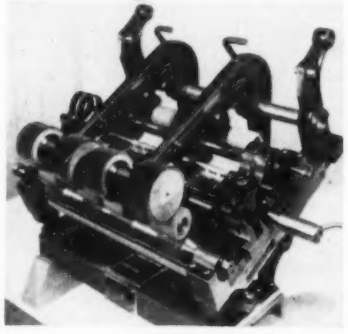
Laminated-Plastic Rolls

Laminated-plastic emulsion rolls designed to solve the twofold problem of yarn staining and corrosion resistance have been announced by Synthane Corp., 24 River Road, Oaks, Pa.

By resisting the corrosive action of newer and increasingly acidic sizes currently being used in the textile industry, the new rolls eliminate the staining problem caused by corrosion on single-end sizes.

The new laminated plastic rolls are designed for use on sizing machines of the Universal and Foster types.

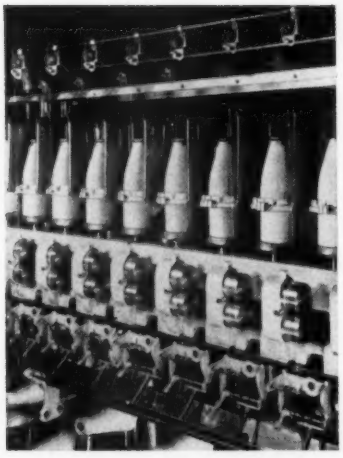
(N-40)

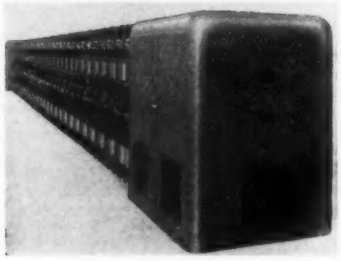


F-5 Drafting Element

An improved drafting element for roving frames has been developed by Saco-Lowell Shops, 60 Batterymarch St., Boston 10,

(Continued on page 212)





Double-Deck Uptwister Averages 65 Lbs. per Hr.

A large-package, double-deck uptwisting machine has been developed by Platt Bros. & Co. Ltd. It is designed to throw long lengths of knot-free yarn for tire cord, for example, at a profitable production speed. The 256-spindle unit handles yarn from 4½-lb. double-flange bobbins direct from the filament-yarn manufacturer and twists single ends at an over-all rate of about 65 lbs. per hr.

The machine has one-shot lubrication, roller-bearing, center-suspension spindles, and individual spindle brakes. Twist range is from 4½ to 53 tpi. Spindle speeds up to 5,200 rpm. are possible.

The MV3 machine is handled by Atkinson, Haserick & Co., 211 Congress St., Boston 6, Mass.

(N-46)

Air Slasher Dryer

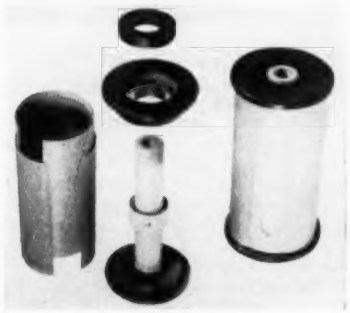
An air slasher dryer with possible productions up to 1,000 lbs. per hr. has been placed on the market by Proctor & Schwartz, Inc., 710 Tabor Road, Philadelphia 20, Pa.

The air dryer can be used equally well on cotton, wool, spun synthetics, and blended-fiber yarns.

Dimensions of the unit are: approximately 14 ft. long, 9½ ft. wide, and 12½ ft. high. The speed range for warp ends going through is variable.

Other features of the unit include: wet splitting of the warp at the entering end, patented air-flow nozzles that give mild action, motor-driven fans, lint screens and heaters readily accessible, exhaust fan, all-steel construction, and smooth inside finish.

(N-47)



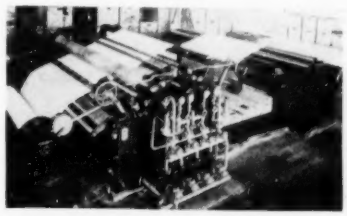
Collapsible Bobbin Eases Nylon-Winding Problems

A new bobbin for nylon yarns—dual collapsible tubes of paper-based laminated plastic—has been perfected by Synthane Corp., River Road, Oaks, Pa. The collapsible bobbin holds residual shrinkage differentials of nylon yarn constant within ¼ of 1% throughout the package. It is said to have already slashed some mills' preshrinking costs by as much as two-thirds.

The assembly contracts slowly as demanded by the tightening of the yarn.

The new unit can be used in the twisting of all nylon yarns. It eliminates the 12-turn restrictions on nylon skeins and the 5-turn limitation on nylon-filament yarns of 200 den. and over.

(N-48)



Austrian Slasher Needs No Water, No Drying Unit

A slasher that does not use water as part of the sizing material but passes the warp through a fusible sizing material that dries immediately in open air is now available from G. H. N. DeBecker, Inc., 165 Broadway, New York 6, N. Y.

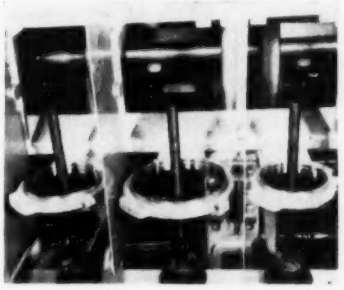
The new slasher has no dry cans or drying chambers and requires a floor space of 15x10x4 ft. When operated electrically, the unit takes no more than 4 hp.

The warp runs over a preheater and heated squeeze rolls and then over a guide roll to the sizing area, where it passes between two heated cotton-fabric-covered squeeze rolls. The lower squeeze roll revolves partly in the liquefied sizing material.

The waxy, nonaqueous substance used as the sizing material is added as a powder to the size box and liquefied at a temperature of 95° C. (203° F.). The size becomes solid again at 60° C. (140° F.), and the warp is ready for beaming almost as soon as it hits room temperature.

Speed of the warp can be as high as 30 yds. per min. No soap or other washing compound is needed to remove the wax-like size.

(N-49)



New Twister Has Adjustable Gauge

A new twister with adjustable gauge has been developed by J. A. Bradshaw, 20 Edgewood Dr., Greenville, S. C. The outstanding feature of the new frame, called Flexal, is almost complete adjustability of gauge, including ring rail, spindle rail, roller beam, thread board, and creel.

Aluminum or aluminum-alloy extrusions eliminate the need for expensive machined parts.

Flexal was originally designed for regauging and modernizing of older twisters, but it is also available as a new frame.

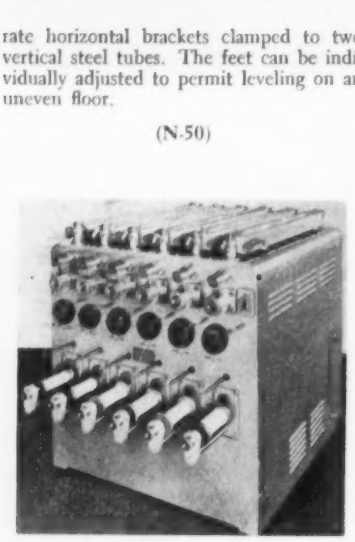
Gauge is adjustable from a minimum of 3 ins. to any maximum. Traverse is adjustable from 6 ins. to 10 ins.

The use of an offset ring holder together with a ring rail positioned inboard of the spindles permits full-length and full-width separators to be used.

Frame support is derived from two sepa-

rate horizontal brackets clamped to two vertical steel tubes. The feet can be individually adjusted to permit leveling on an uneven floor.

(N-50)



Machine Control-Stretches Newer Synthetic Yarns

Stretching of nylon and Dacron yarns is possible on a commercial basis with a 5x4x4-ft. hot-stretching machine developed by W. M. Steele Co., Inc., 171 Fremont St., Worcester 3, Mass. The unit reduces the elongation of nylon yarn to approximately 12%.

Yarn from 140 to 1,000 den. is stretched 50 to 300 yds. per min. on each of the six spindles. Each spindle is individually driven with a slow start and infinitely variable speed control. Incoming yarn tension is controlled by Kidde Tensometers. Yarn-break controls are provided.

In operation, the yarn is stretched between rolls at the front and rear of the machine and is heated to a temperature of 400° F. by contact with the heater on top of the machine. The level-wind mechanism is driven by a hydraulic cylinder.

(N-51)

Automatic Size Box Controls Warp Pickup

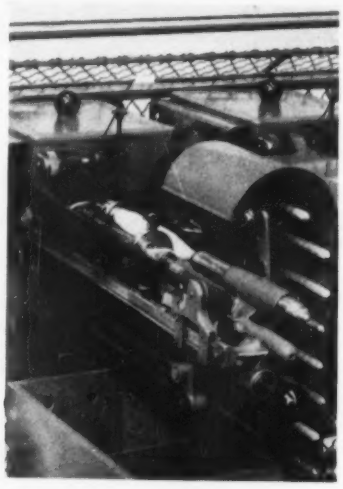
A new size box that automatically blends size concentrate and water at a temperature just under boiling, delivers to the box, and dilutes the size concentrate so that the taking-up and delivery rates are the same has been put on the market by Joseph Hibbert & Co. Ltd., Darwen, Lancashire, England.

Two control dials beside the size box are provided, one for manual setting at the weight per 100 yds. of the warp to be sized and the other for setting at the percentage of size pickup desired.

Variations in size properties and warp pickup are automatically compensated for, and the percent size applied is said to be accurately maintained from set to set.

The stainless-steel size box has a capacity of 11 gals.

(N-52)



Wind Synthetic Yarns At High Speed, Low Tension

High-speed winding of the newer synthetic yarns at low tensions is the feature of a redesigned winder now available from Brugger & Co., Horgen, Switzerland.

Low tension at high speed has been obtained by a six-point, six-way cam in the spindle box that gives a triple layer locking at three different traverse points in the building of the bobbin. An improved cam-winding motion gives winds up to 30 per minute, depending on the denier, on all types of filling bobbins.

Spindle speed is 6,100 to 8,000 rpm. The cam makes only 44 rpm. when the spindle is running at 6,100 rpm. The feeler stop motion operates on every third traverse.

A new compensating tension applies a gram tension of 10% or less of the denier being wound.

(N-53)

Steel Travelers Last Longer With Bronze-Insert Rings

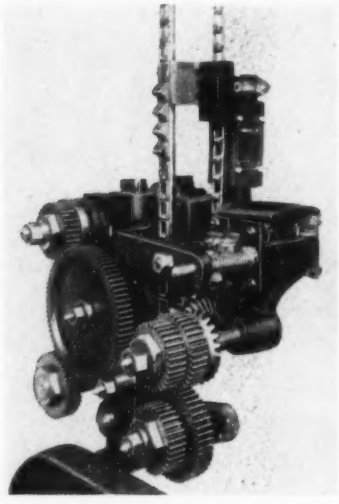
A steel twister ring with a patented bronze insert built into the inner circumference has been developed by Twin Textile Ring Co., 13231 Euclid Ave., Cleveland 12, Ohio. The new ring can take a steel traveler successfully up to about 4,000 rpm.

Steel travelers used with the new ring average a wear life of three to six months.

In addition to the higher production rate of the Twin ring, labor is saved because the travelers do not have to be renewed so frequently. Use of the new ring also eliminates all need for debronzing.

Less oiling of rings is required. Lubrication is positive for the lower curvature of the traveler.

(N-54)



Novelty-Yarn Assembly For Collins Twisters

A novelty-yarn-producing assembly that fits into the foot end of its twister frames is now available from Collins Brothers Machine Co., 647 Roosevelt Ave., Pawtucket, R. I. The assembly is activated from a pattern chain rather than a cam.

It is necessary to disengage only one gear to make the novelty twister into an ordinary ply twister unaffected by the foot-end assembly.

The risers pass through a limit switch that activates a solenoid, which in turn engages and disengages the top line of feed rolls. Thus the top line of feed rolls gets the stop-and-go motion that is the basis of novelty-yarn construction.

The assembly can be used in conjunction with an over-running clutch attachment that makes possible splashes of any desired length and frequency.

All the change gears on the single-roll knotting attachment for the company's novelty twisters are 12 pitch, the same as the twister gears; so they are interchangeable.

(N-55)

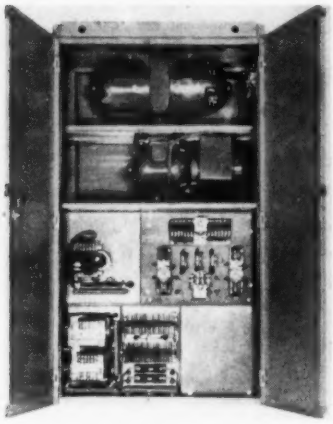
Dynamically Balanced Bobbin

A new bobbin that does not require dynamic balancing has been put on the market by Lestershire Spool & Mfg. Co., a division of National Vulcanized Fibre Co., Johnson City, N. Y.

All screws are eliminated. The heads are held rigidly in place by beveled aluminum

bushings that give annular distribution of stress. The bushings are threaded directly to the aluminum center tube of the bobbin. The barrel, of molded Bakelite, fits snugly at the center against the inner metal tube and around the end bushings. This construction assures great strength for the entire barrel and concentricity for the unit.

(N-56)



Packaged Multimotor Drive Controls Slasher Tension

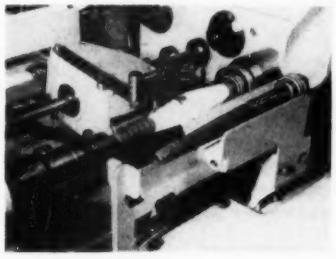
A new packaged multimotor slasher drive using magnetic amplifier controls is available from Westinghouse Electric Corp., Box 2099, Pittsburgh, Pa.

The new drive is designed to provide high efficiency, reduced maintenance, and better control of tension. The complete operation is controlled by push buttons and a speed-setting rheostat. Tension between sections can be changed during operation.

Excitation for the generator and all the drive motors is furnished by a static selenium-type rectifier. A magnetic amplifier regulates the beam motor to give constant winding tension.

The entire unit is enclosed in a lint-tight cabinet 76 ins. high, 42 ins. wide, and 25 ins. deep.

(N-57)



All-Purpose Filling Winder Has New Improvements

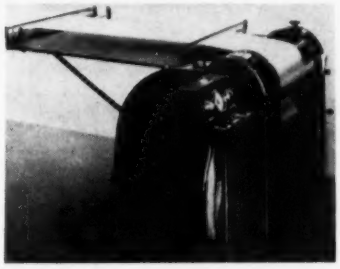
The new Hacoba automatic filling winder, which incorporates a new builder motion, a new yarn guide, and a new tensioning arrangement that permits winding with a high and constant density, is available from Atkinson, Haserick & Co., 211 Congress St., Boston 6, Mass.

All types of fibers can be wound. Winding speeds for medium yarns are 10,000 rpm. and over. Fine yarns wind at spindle speeds of 8,500 to 9,000 rpm.

The builder motion uses an adjustable advancing mechanism that incorporates the original unit's four-spindle winder bar. A flat feeler insures cylindrical packages; but it can be swung out of the way when there is danger of yarn abrasion, and the yarn then advances on the package by positive gearing.

Automatic compensation of tension is provided for during the whole traverse of the winding of the bobbin so that there is no density variation between the base of the bobbin and the tip.

(N-58)



Electronic Warper Has Only Three Manual Controls

An electronically controlled warper is now available from Crowther Ltd., 637 Craig St., W., Montreal, Que., Canada.

Warping speeds are up to 800 yds. per min., infinitely variable as desired within a ±1% accuracy. Clutchless control gives a smooth start.

Traverse and speed can be varied by change gears.

Beam sizes are up to 21½ ins. with 14- and 24-in.-dia. beam flanges.

There are only three manual controls: the resetting lever of the predetermining revolution counter, an engaging-disengaging lever for doffing, and a lever to disengage the pressure rolls.

The warper is designed to work in conjunction with a Crowther or other electric-stop-motion creel.

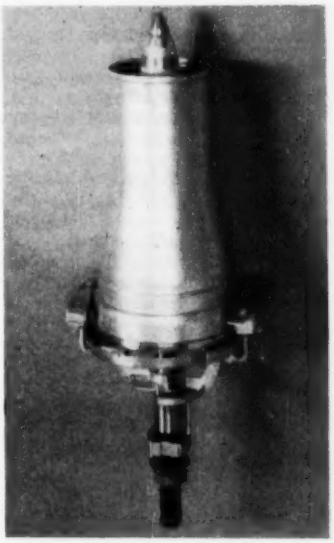
(N-59)

Laminated Rolled Tubing For Winding Glass Fibers

A special rolled tubing made of Dilecto (a laminated, paper-based, thermosetting plastic manufactured by Continental-Diamond Fibre Corp., Newark 55, Del.) has been developed for winding glass fibers. Bobbin bodies made from this new material possess high mechanical strength.

The tubing is available in a wide variety of diameters and lengths.

(N-60)



Double-Twist Twisting Spindle

With controlled double ballooning in twisting fine-count synthetic yarns, yarn tensions as low as 0.1 gm. per den. at speeds of 10,000 rpm. are possible with a double-twist spindle developed by Landolt & Co., Aurorastrasse 84, Zurich, Switzerland. High twists, excellent production, undamaged yarn, and low power consumption are possible with frames equipped with the spindles. Production is the same as the production of an ordinary twister spindle run at 18,000 to 24,000 rpm.

(N-61)

Bobbin Has Aluminum Barrel

A new bobbin and a headless-package tube for synthetic yarns have been developed by Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y. They offer full resistance to the crushing strength of synthetic yarns in the packaging process.

The plastic used is a laminated phenolic. No screws are used in the construction of either product.

The aluminum tube of the bobbin makes possible a large-diameter head connection to provide maximum resistance to yarn pressure, furnishes support to the barrel, and distributes the pressure load advantageously.

The plastic used in the headless tube is snag-free, distributes heat evenly in the steaming operation, does not oxidize, and is light in weight.

(N-62)

Size Cooker-Homogenizer

A method for preparing warp size that is said to combine the advantages of cooking and homogenization and incorporates

the use of a viscometer, so that each batch is finished to a fixed viscosity, has been developed by Norcross Corp., 247 Newtonville Ave., Newton 58, Mass. The equipment is called the Sizeometer.

A pump is used to withdraw size from the lower end of the cooking kettle and to discharge it into a mixer within the cooking kettle. The steam is also discharged in this mixer so that the size is agitated and actually cooked under pressure. The pressure built up in the mixer by the combined effect of the steam and the pump gives the advantages of pressure cooking; the pressure also extrudes the size from the mixer into the cooking kettle through orifices that further break down the size globules.

The combined effect is smooth, uniform size in approximately one-third the normal cooking time.

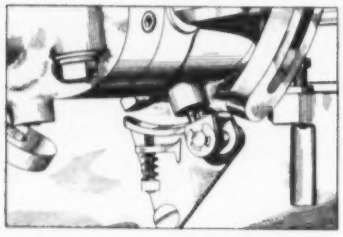
(N-63)

Mercury-Sealed Stop Motion

Heavy cotton, wool and synthetic yarns up to 15-den. nylon can be run sucessfully with a new mercury-switch stop motion for creels developed by Edward J. McBride Co., Inc., Cottman Ave. and Wissinoming St., Philadelphia 35, Pa. As soon as a drop wire starts to fall, the creel stops instantly. By adjusting individual rider weights, drop-wire sensitivity is adjusted for the weight of the yarn going through.

The electrical contact of the mercury switch is not subject to humidity conditions, corrosion, dust, or lint. Drop wires are stainless steel.

(N-64)

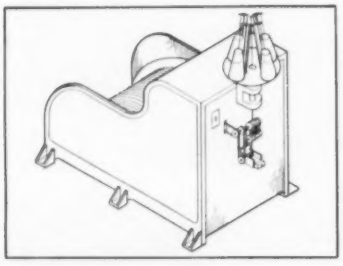


Roto-Coner Snubbing Attachment Keeps Packages Steady

A snubbing attachment for Roto-Coner winders has been made available by Universal Winding Co., Box 1605, Providence, R. I. The unit acts as a damper on the cone holder when it is in the winding position yet allows the holder to drop gently onto the traverse when a package is being started.

The snubber overcomes the tendency to bounce by means of friction that it applies between the stud holder and the spindle-holder bearing assembly. The friction steadies the package on the rotary traverse during winding.

(N-65)



Cord-Making Machine Produces From Single End

A new high-speed cord-making machine has been developed by John Silver Co., Shirley Center, Mass., that works more on a knitting principle than as a braider or twister. The machine is designed primarily to make venetian-blind and traverse cords.

Depending on the cord size and stitch, up to 1,000 ft. per hr. can be produced from a single end of yarn. In addition, in the same operation, the cord is finished with a plastic coat, starch, or any other type of finish desired. Cotton, rayon, nylon, jute, plastic, and other fibers and yarns can be processed on it.

(N-66)

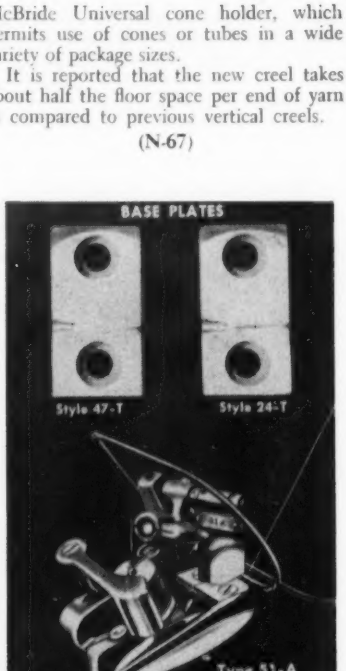
Vertical Magazine Creel For Large-Package Yarns

A new vertical magazine creel that is designed specially to handle cakes, cheeses, and other heavier yarn packages has been announced by Edward J. McBride Co., 1400 Adams Ave., Philadelphia 24, Pa.

The new creel is equipped with the latest sealed mercury-switch stop motions and two-way signal lights for quick location of broken ends. The creel is also equipped with the recently announced McBride Universal cone holder, which permits use of cones or tubes in a wide variety of package sizes.

It is reported that the new creel takes about half the floor space per end of yarn as compared to previous vertical creels.

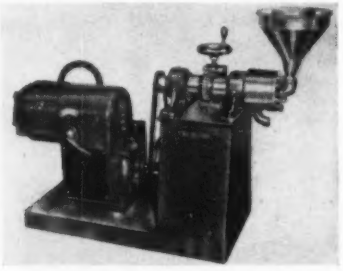
(N-67)



Slub-Catcher Base Plate

Ceramic base plates are now standard equipment on the tension, slub-catching, and waxing attachment that is used on the Model-102 Foster winder, Foster Machine Co., Westfield, Mass., has announced. Tests have shown that the new base plates are more resistant to the cutting action of worsted and other types of yarn than hardened steel and that they last four or five times as long.

(N-68)



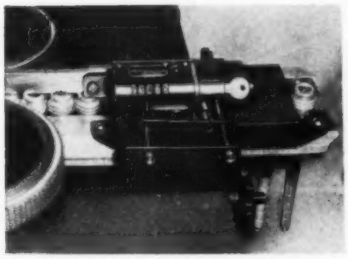
Homogenizer Has Micrometer Adjustment

A variable-speed homogenizer and dispenser that operates at 2,500 to 25,000 rpm. has been developed by Tri-Homo Corp., 190 Highland Ave., Salem, Mass. Both heavy and light viscous compounds can be reduced in particle size, dispersed, milled, emulsified, homogenized, wetted,

or blended. Units with up to 25-gals.-per-min. production are available in laboratory models, while unlimited capacities are possible in production models.

The particle size of the resultant product is obtained by setting the micrometer-type hand adjuster, graduated in thousandths. Overheating is prevented at all times by correct speed regulation and a water-cooling jacket.

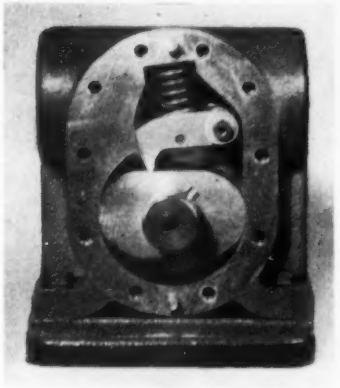
(N-69)



Counter for Quill Cleaning

An accurate method of counting quills processed through its Type L quill-cleaning machine has been developed by Terrell Machine Co., Charlotte, N. C., in collaboration with Durant Mfg. Co., 1929 N. Buffum St., Milwaukee 1, Wis. The new-model Productimeter makes quill cleaning a piece-work operation.

(N-70)



Delivery Pump for Warp Size and Dyes

A long-wearing, nonpulsating pump that can handle a wide range of viscosities has been developed by Textile Pump Div., Hinckley Corp., 264 Arlington St., Watertown 72, Mass. Called the Rotorarm pump, CR-33, its primary textile use is in warp-size and dye delivery.

Included in the specifications are the following: displacement, 0 to 60 gals. per min.; speed, 400 to 1,750 rpm.; discharge pressure, up to 100 psi.; vacuum, up to 28 ins. of mercury; weight (including underframe), 37½ lbs.; and drive-shaft diameter, 1⅛ ins.

(N-71)

Ball-Bearing Twister Spindle Needs No Oiling

Five years without attention, more-even twisting, higher operating speeds, improved braking, and spindle adjustment during operation are features of a new twister spindle offered by Hartford Machine Screw Co., Box 1440, Hartford 2, Conn. Prepacked ball bearings require no oiling or other attention for an estimated five years.

This antifriction feature makes for smoother operation of twister frames at high speeds and also results in a more-even yarn twist. Aiding the smoothness are rubber mountings for both ball bearings.

For keeping the spindles plumb, the new spindle has a double-eccentric aligning device in the base, a device that makes adjustments possible while the spindle is running.

A height adjustment for the bobbin is available.

(N-72)

British Cotton-System Twister Has Its Creel Below the Frame

An all-purpose twister for natural and synthetic fibers spun on the cotton system has been introduced by S. E. Scragg & Co. Ltd., Macclesfield, Cheshire, England. The full-size machine has 128 spindles and runs at 8,000 to 8,500 rpm. The standard ring size is 3¼ ins.; the length of traverse is 8¼ ins.

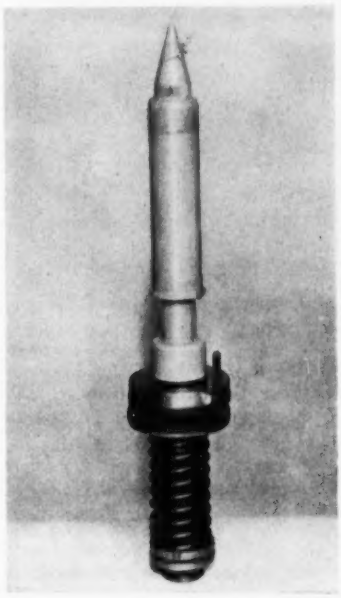
Cones weighing up to 2 lbs. are used in the creel, which is located underneath the frame; and twister bobbins of the bottle type, holding up to 14 oz. of yarn, are formed.

From the cones and through an automatic stop-motion arrangement, the yarn is brought upward and around the twin feed rolls, which are slightly tapered and which engage and disengage, as required, from an individual gear drive.

From the feed rolls, the yarn passes down to a trough, up to the top-rail pulley, and down through the traveler to the bobbin. The top-rail pulley moves up and down with the ring rail to insure a constant balloon. Antiballoon separators are provided.

Yarns as fine as 120s can be twisted on the frame, as well as 15/3 or even filament yarns in various deniers.

(N-73)



Throwing Spindle Has No Flyer, Ring, or Traveler

The Sirnach HZS high-twist twisting spindle, which can double the twisting speed of ordinary high-twist twisters because it has no flyer, ring, or traveler, has been developed in Switzerland by Sirnach Machine & Metal Works Ltd. It is available in the United States from Werner Gabler Co., Inc., 1025 Connecticut Ave., N. W., Washington 6, D. C.

The spindle is used for inserting additional twist in yarn such as crepe and voile yarns. It is not used for plying two single ends together.

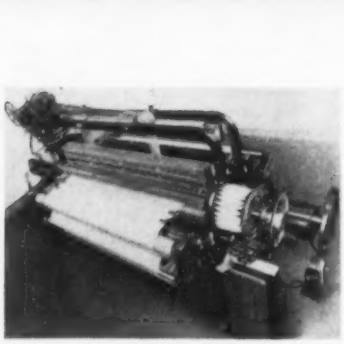
Timestudies show that an operator can handle up to 1,200 spindles with a 12,000-rpm. spindle speed.

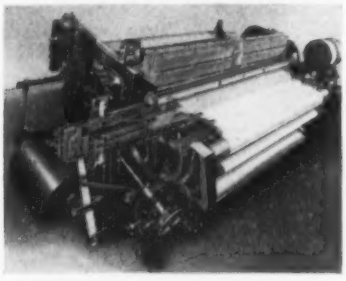
(N-74)

Improved Twister Bobbins

Double-slotted twister bobbins have been put on the market by Akron Spool & Mfg. Co., Cuyahoga Falls, Ohio. Wear is

(*Continued on page 214*)





Two New Looms Are Designed To Mix Filling

Two new looms that will weave 75% of all styles of worsted, woolen, and blended fabrics are being built by Crompton & Knowles Loom Works, Worcester, Mass.

According to C&K, the new looms contain the smallest possible number of moving parts and are built rugged enough in the frames and driving parts to weave any conventional worsted type or synthetic-fiber fabric.

The 82-in. looms weave cloth up to 76 ins. wide. The looms are equipped with box motions of the positive-geared or cam type and are for 2x1 filling-mixing weaving only.

A single-piece crankshaft is of 2½-in. dia. and has a throw of 6½ ins.

The center stop motion can be selected from the standard type or from two complete motions placed 24 ins. apart. A Micro switch also helps the center stop motion stop on tip-offs.

Newly patented binders at both ends of the loom control shuttle boxing and contribute to increased loom speed and better fabrics.

A scissor-type thread cutter, another new development, operates at the eye of the shuttle to eliminate jerk-backs. A new-type temple thread cutter also reduces jerk-backs because it cuts the filling on the exhausted filling bobbin on the first pick after the transfer and on the new bobbin on the second pick.

A rotary magazine with a capacity of 22 bobbins is operated by a cam on the bottom shaft. The magazine can be set for 8¾-in. bobbins or for 8-in. bobbins if a mill wishes to use its old bobbins.

Beams of up to 32-in. dia. can be used.

The harness motion can be selected from the Knowles head, dobby, or a newly designed end-cam mechanism. The end-cam harness motion is equipped with harnesses that have two heddle bars and two lines of heddles per frame.

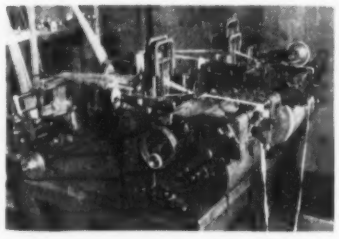
Cams are available to give four, five, or six picks to the round. This range of harness designs will weave fabrics such as 18-oz. Army serge and 2x2 twill up to 6,426 ends.

The harnesses receive their vertical movement from cams at the drop-box end of the loom through connectors and angle levers. Pull-down springs lower the harnesses and also keep the harness-motion parts under proper tension.

Since there is nothing over the harnesses, waste and dirt in the woven cloth are reduced.

The manufacturer says that because of the high speed and low maintenance cost, these two looms weave conventional fabrics more economically than any other loom it has built.

(N-81)



Shuttleless Narrow-Fabric Loom Weaves 2,000 Ppm.

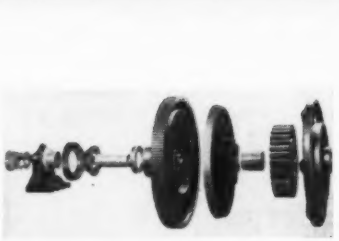
What appears to be a significant narrow-fabric loom has been developed by Disco Industries, Inc., 443 Greenwich St., New York, N. Y. The loom can weave ribbons and tapes of any fiber or yarn up to 4 ins. wide at a rate of 2,000 ppm., or about 10 times as fast as ordinary narrow-fabric looms.

A needle with an eye in it transports a single end of filling back and forth rapidly through sheds up to 4 ins. wide. Each shed has two picks in it.

Far-end selvage is formed by means of a latch needle, positioned parallel to the selvage and attached to an eccentric motion. Both the filling and an extra locking end from the creel pass over the needle in a circular motion to form a loop selvage.

Three change gears can vary the picks per inch from 8 to 128.

(N-82)

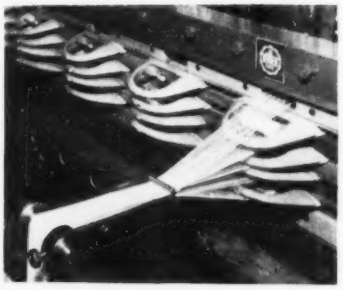


Improved Loom Drive

The Model D1 loom drive developed by Bahan Textile Machinery Co., Greenville, S. C., is said to require few adjustments by the loomfixer.

Adjustments to keep the drive operating are not necessary because: (1) no grease or oil can get to the clutch friction disk to cause slippage, (2) grease is forced to every part that requires lubrication, and (3) drive parts are designed to prevent wear.

(N-83)



Ribbon Looms Run 180 and 120 Ppm.

Two Swiss narrow fabric looms, one for weaving webbing at 180 ppm. and the other for weaving Venetian-blind tape at 120 ppm., are available in the United States through Ernest L. Frankl Associates, 22 E. 40th St., New York, N. Y. Heavy tapes and military webbing are made on the Model CR19, available up to 22 dents per inch in the reed, in widths up to 15¾ ins., and with head motions to handle 24 harnesses without the use of springs. Venetian-blind tapes are made on the Model DR29 loom. The simultaneous movement of the four shuttles in each bank makes possible the weaving of two tapes simultaneously. Normally 16 dents per inch in the reed are run.

(N-84)

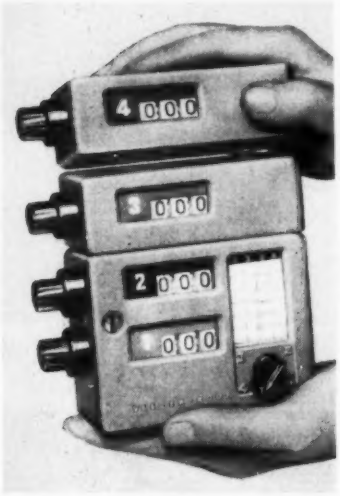
New Thread Cutter Is Lightweight and Versatile

A new Verybest thread cutter, designed for use on any battery loom, is now avail-

able from Bullard Clark Co., Danielson, Conn.

The thread cutter is one-third the weight of conventional cutters and has fewer parts to get out of adjustment. It holds and cuts everything from 15-den. nylon to 6s cotton yarn; positive opening and closing eliminates drag-ins. Dropping of a cut pick is assured because of the short, wide-opening blades. There is one set of parts for all looms, shuttles, bobbins, and yarns.

(N-85)

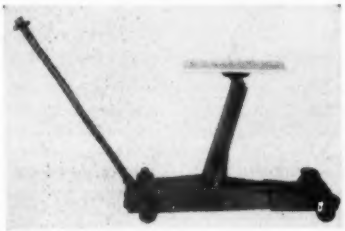


New Counter Design for Picks, Hanks, Yards, Courses

Easier-to-read 2-3 convertible counters manufactured by Veeder-Root Co., Hartford, Conn., and Greenville, S. C., have larger windows as well as shear-pin-proof black plastic reset knobs that are easier to turn.

Internally, the counters feature brass bearings on horizontal shafts and Oilite bronze bearings on vertical drive shafts. A plastic drive connection is another improvement over the former cast-iron unit in its ability to withstand humidity, shock, and wear.

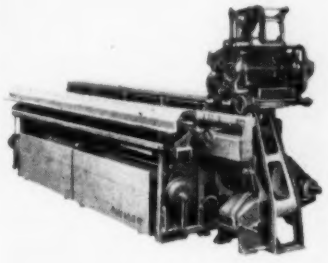
(N-86)

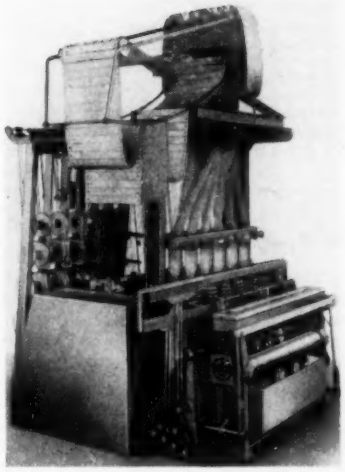


Warp-Beam Dolly Lifts Beams 27 Ins.

A hydraulic warp-beam dolly for handling beams up to 28 ins. in diameter, 90 ins. in length, and 8,000 lbs. in weight is available from Standard Mill Supply Co., Box 1534, Providence 1, R. I. The truck, which weighs 226 lbs., is available with a 14½x26-in. or a 14½x40-in. swiveling cradle. Beams are lifted 27 ins. off the floor.

(N-87)





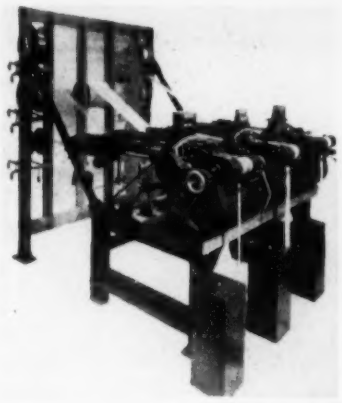
Swiss Label and Ribbon Looms Are Versatile

Swiss narrow-fabric looms for the manufacture of rayon, cotton, silk, and elastic tapes and ribbons are now available from Ernest L. Frankl Associates, 22 E. 40th St., New York 16, N. Y.

The CR-29 loom is built to weave velvet ribbons ¼ to 12 ins. wide at 160 to 180 picks per minute. Space for 14 to 32 dobby shafts is provided, and the loom is equipped with filling and warp stop motions.

Another new loom made by the same company (CJ-29) has 6 to 56 spaces and 1 to 5 shuttles for speeds up to 150 picks per minute. Jacquard heads with 200, 400, or 600 hooks can also be applied to this loom.

(N-88)



Ribbon Loom Inserts 900 Ppm.

A new Italian-made loom available in the United States through British Italian Trading Co. Ltd., 75 Bishopsgate, London E. C. 2, England, has a needle shuttle that gives speeds up to 900 single picks per minute. The loom, called the Sitam 3A60, is suitable for any type of narrow-fabric work. Ribbons and webbings up to 2¾ ins. can be woven.

Three heads are bolted to a wooden block. Each head is independent of the other two in speed, yarn numbers being run, or warp ends or filling picks per inch. Warp and filling stop motions are provided.

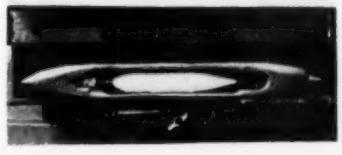
(N-89)

Axminster Jacquard Motion

A modified type of axminster-carpet jacquard head that uses punched cards capable of selecting up to 12 colors has been announced by John T. Hardaker Ltd., Bradford, England.

The machine is designed so that a hole in the card selects the appropriate-color end and so reduces the amount of cutting required. This arrangement also gives added strength to the cards.

(N-90)



Shuttle-Tension Tester

A new instrument to measure the tension at which yarn is unwound from the shuttle during weaving is being marketed by Shirley Developments Ltd., Shirley Institute, Didsbury, Manchester 20, England.

The standard model is calibrated to read tensions of up to 100 gms.

(N-91)

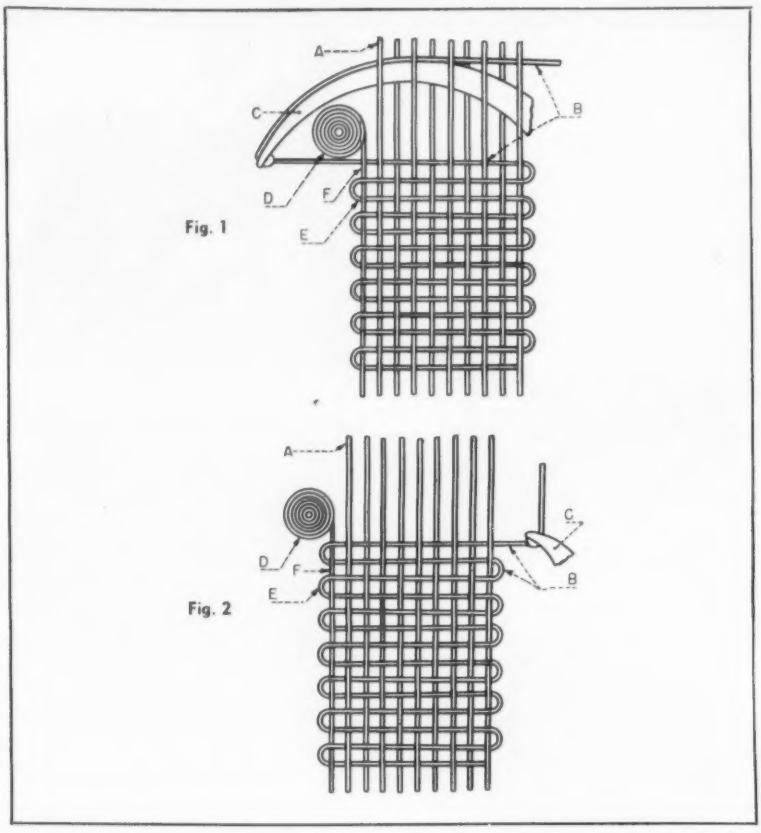


Fig. 1

Fig. 2

Italian Shuttleless Loom Weaves 300 Ppm.

Shuttleless tape and ribbon looms manufactured by Texnovo S.p.A., 8 Via Revere, Milan, Italy, have been made available and are illustrated in the double sketch.

Fig. 1 shows the tape with the shed open, penetrated from the right-hand side by the needle *C*. *A* is the last warp end at the left-hand edge controlled by the heddles. At the end of the curved needle is a small eye through which the filling *B* passes to form a loop at the left-hand edge through which a small spool of yarn *D* can pass.

The vertical movement of the spool locks the loop of filling so that when the needle returns to the right-hand side (Fig. 2), the double pick is securely held in position. To help hold the pick is a thin steel wire at *F* running parallel to the outer warp end, which stiffens the latter as it is subjected to the filling tension caused by withdrawal of the needle.

For shedding, these looms are equipped either with 12 harness jacks capable of weaving repeats up to eight picks, or with a normal 16-harness dobby.

(N-92)

Weave-Room Smash Repairs Aided With Wax Spray

A prepacked water-soluble wax, dispensed from a pressurized aerosol can to aid smash hands in their repair of damaged warps, is supplied by Specialty Products Co., 115 Morris St., Jersey City, N. J.

Sprayed lightly on broken warp ends, the compound plasters down the broken fibers, is water soluble, is easily removed in scouring, does not discolor yarn.

The dressing is effective on both filament and spun yarns. It has an antistatic effect on the newer synthetic fibers.

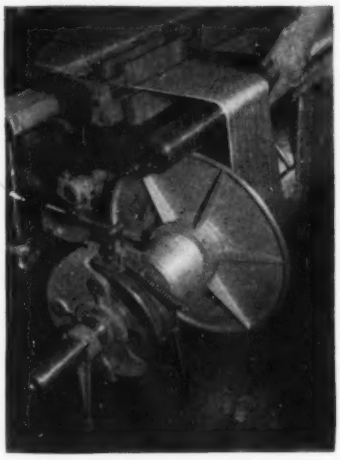
(N-93)

Long-Life Picker Stick

The Armotek picker stick, which has the elasticity of wood without its weaknesses, has been introduced by Emmons Loom Harness Co., Lawrence, Mass., and Charlotte, N. C. The new stick is supposed to outlast and outwear conventional one-piece picker sticks 5 to 10 times.

To insure that the new stick will not split, even at the hole, the manufacturer has put in full-length reinforcements of densified wood. Each stick is custom tapered for a specific picker-stick model.

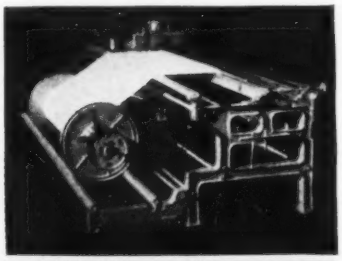
(N-94)

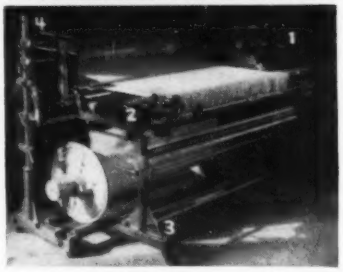


Let-off for Warp Beam

A constant-rate-of-tension let-off for warp beams on all kinds of looms is available from George Fischer Ltd., Schaffhaus, Switzerland. No attention to the compression-spring let-off, once it has been set correctly, is necessary for the life of the beam.

(N-95)

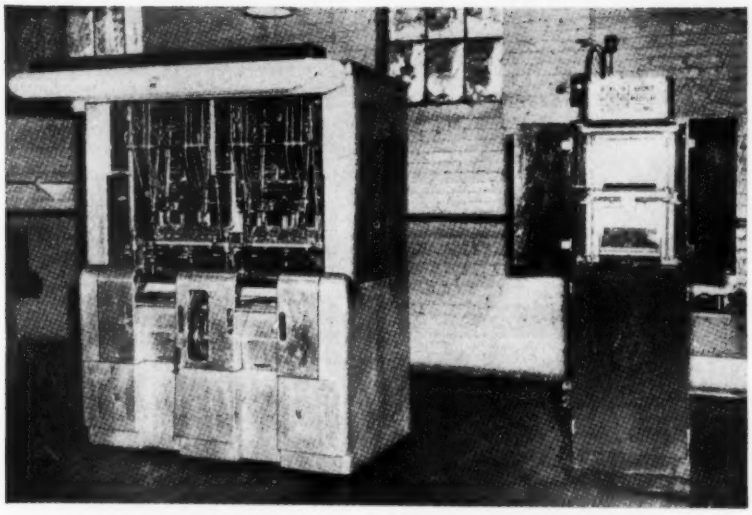




Leasing, Warp-Tying Machines

Two German textile machines of interest are now available in the United States and Canada from Stellite American Corp., 60 E. 42nd St., New York 17, N. Y. They are the Model 1951 leasing machine and four models of warp-tying machines, manufactured by Maschinenfabrik Oskar Fischer of Wuerttemberg, Germany. The leasing machine (top) will put an end-to-end lease in any warp made of any yarns without a change of leasing needle. Up to 12,000 ends per hour can be leased

(Continued on page 220)



F.-F. Knitting Machine Knits 160 Courses a Minute

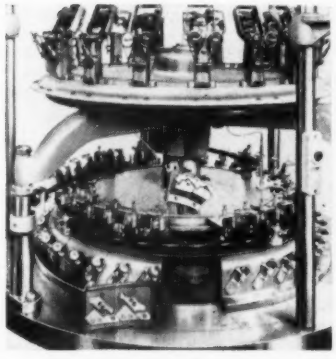
A full-fashioned knitting machine developed at Chattanooga, Tenn., is said to double present full-fashioned-hosiery production rates.

Among features of the new machine are electric and electronic control of the knitting cycle; a 10x10-in. pattern sheet and "call" fingers; and "clip-a-switch" adjustment for size and length.

The first model of the new machine, which was built for Beautiful Bryans, Inc., consists of two knitting heads said to knit at about 160 courses a minute. While a standard 32-section machine turns out 16 doz. pairs of hose in 8 hrs., this machine in a 32-section size is reported to be capable of producing 28 doz. pairs in 8 hrs.

Plans have been completed to have a 32-head production-model machine built. The production model will be built in four units of eight heads each, with all 32 heads controlled from one control box.

(N-105)



Cast-off Timing Changed by Inverting Cylinder Stitch Cams

A new rib-knitting machine, the 4RLAM, has been introduced by Mellor Bromley & Co. Ltd., Leicester, England. The machine is designed to knit lightweight elastic underwear and outerwear fabrics at a high production. It can outproduce an interlock machine of the same diameter by 75%.

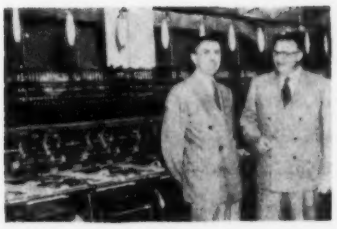
Needle cylinders vary from 9 to 30 ins. in diameter. Gauges range from 10x10 to 16x16. The 17-in. unit has 24 feeds, and the 22-in. cylinder has 32. Feeders spaced at intervals of approximately 2 ins. around the machine allow gaps that facilitate running on.

A 17-in.-dia. machine, equipped with 24 feeds with 14x14 needles per inch, using 30s cotton, will produce 65 to 70 lbs. of rib fabric in 8 hrs.

A variety of tuck effects are available because of the increased number of feeders. A wide range of horizontal striped fabrics, in 1/1 or 2/2 rib, can be produced. Single ribs can be knitted with delayed timing on the dial.

The necessity of moving the dial cam plate for the production of 2/2 rib fabrics has been overcome by fitting a stitch cam of special design that, when reversed, automatically synchronize the dial and cylinder stitch cams.

(N-106)



Knitting Speed Increased 25% On Reading F.-F. Machine

A marked increase in knitting speed of the new Reading 100 60-gauge full-fashioned machine, developed by Textile Machine Works, Reading, Pa., has been obtained by means of new design features in about 600 parts on the machine.

The leading improvements in the components and motions of the machine are:

1. Redesigned cam levers and cam motions
2. Improved balancing-cam motion to secure uniform turnover of the machine
3. Redesigned sinkers and dividers with a shorter new-shaped sinker nose
4. A newly developed catch-bar safety device that prevents damage to cock-box housings, jacks, jack beds, sinker heads, and verge plates
5. Needles with shorter and new-shaped beard
6. An extended presser edge developed in conjunction with the new motion
7. Center bed redesigned for better heat radiation
8. Heavier front catch-bar and knock-off-bar shafts to reduce torsion and flexing at higher speeds
9. A perforated carrier
10. Tapered roller bearings in the coulier rollers

(N-107)

New High-Speed Tricot Machine Features Diehl Drive

Quality fabrics are produced at speeds in excess of 500 courses per minute on the

new tricot machine from Whitin Machine Works, Whitinsville, Mass. The higher speed has been obtained by removing 450 lbs. from the motion area and retaining strength and rigidity.

Precise runner control is maintained by a self-correcting yarn let-off. A positive drive is given to each warp beam. The sensitivity of correction for the changing diameter is said to eliminate shade marks.

A Diehl drive that gives rapid starts and stops has been made standard equipment. The drive provides an unlimited range of control for inching without complicated electrical controls or clutches.

Needles are always in their down position when the machine stops.

The fabric take-up motion has been redesigned to allow accurate control for a wider range of fabric qualities.

(N-108)

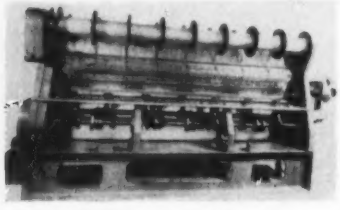
Fleece-Fabric Knitter Handles 6-Lb. Yarn Packages

A new fleece knitting machine made by H. Brinton Co., Kensington Ave. and M St., Philadelphia 24, Pa., handles yarn packages as large as 6 lbs. Diameter is 26 ins., and there are 36 feeds.

The new machine is made in cuts varying from 8 to 18 and has design wheels and manual tuck bars on all feeds.

Standard equipment includes individual motor drive, push-button jog control, noiseless magnetic clutch with self-contained electric panel, a 72-end bobbin table with a 36-end double stop motion, and a take-up reel with automatic roll control.

(N-109)



New Simplex Machine Knits 400 Courses per Minute

A new Simplex tricot machine that has a 122-in. knitting width is offered by Alfred Hofmann & Co., 629-635 59th St., West New York, N. J. The machine knits at 300 to 400 courses per minute.

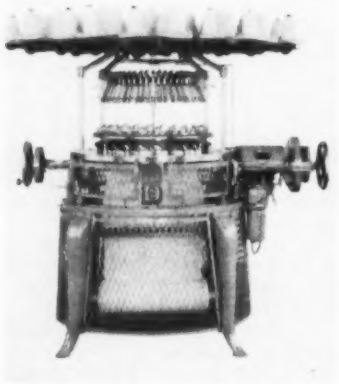
(N-110)

Safety Carrier Protects Full-Fashioned Machine

A safety carrier designed to eliminate the damage that occurs when the yarn carrier of a full-fashioned machine gets out of time with the sinkers has been put on the market by Textile Machine Works, Reading, Pa. The carrier is very light and can be fitted to all postwar Reading machines.

During knitting, the tube is located in a vertical position and feeds the yarn to the sinker throats. If the tube strikes a sinker, the impact overcomes the tension holding the tube in its vertical position and allows it to swing to one side. The tube remains clear of the sinkers until it is reset by the machine tender or fixer.

(N-111)



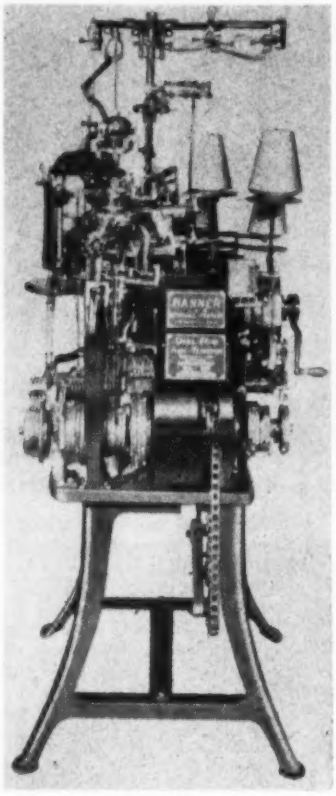
Jersey Mesh Machine Makes Fancy Eyelet Fabric

Various eyelet and mesh constructions for basque shirts are possible on a knitting machine now available from H. Brinton Co., Kensington Ave. and M. St., Philadelphia 24, Pa.

The Merweel-Eye, Style RMWE, has a 24-in.-dia., 24-feed, 18-cut sinker-top revolving cylinder and produces eyelet fabric in both plain and fancy designs.

The machine has an individual-motor drive, a 48-end bobbin table, and an electric stop motion. Standard equipment for pattern work includes 24 sectional wheels.

(N-112)



New Anklet Machine Eliminates Hand Transfers

A completely automatic rib-top anklet machine, called the Dial Rib ARA-400, has been perfected and mill-tested by Hemphill Co., Pawtucket, R. I. Hand transfers by specialized help are no longer necessary.

The ARA-400 can produce anklets in sizes from 4 to 12 on a 3-in. cylinder using various cylinder cuts. The machine knits complete anklets with genuine rib tops automatically transferred to the boot at the rate of 5 to 5½ doz. pairs per 8-hr. shift. Also available are picot edge, multiple horizontal stripes in top, foot, or in combination; high splice and double sole; reinforced heel and toe or tip, heel and toe; needle stop motion; and loading-up stop-motion attachments.

The machine is capable of knitting a large assortment of yarns, synthetic, mixtures, and regular types.

The ARA-400 is available in 48 or 54 gauge with a standard 3-in. cylinder.

(N-113)

(Continued on page 226)

Bond Dyeing Machine Uses Shotgun Technique

Savings in time, dyestuffs, and floor space are claimed for the new dyeing machine invented by Boyce C. Bond (shown above) and manufactured by Hussong-Walker-Davis Co., Philadelphia, Pa. Pittsburgh Coke & Chemical Co. is sponsoring the development.

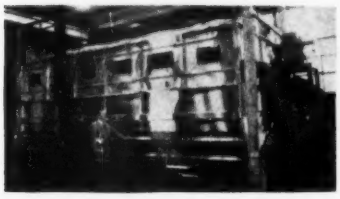
Versatility in the types of dyestuffs used, flexibility for short runs, and better and speedier diffusion of dye solution throughout the fabric are among the more important advantages claimed for the machine.

The machine is capable of operating at any speed between 20 and 120 yds. per min., depending on the type of fabric and class of dyestuff used.

The continuous-dyeing machine has:

1. Injection plates that direct dye liquor onto the face and back of the fabric simultaneously
2. A filtering system that keeps plate orifices clear and a method for backflushing alternate sets of filters during runs
3. Hydraulic lifts to raise upper plates for easy threading and cleaning of the units
4. Steam-chest heating units that will present a smooth, coil-free surface in each unit for easy cleaning

(N-123)



Full-Width Dyeing For Cotton Carpeting

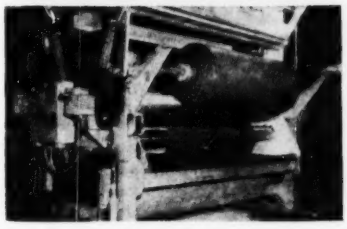
A new line of Tru-Shade dyeing machines, designed for the dyeing of cotton-rug and carpet fabrics, has been developed by Rodney Hunt Machine Co., Orange, Mass. These machines have been tested in the field and are reportedly proving highly successful for the dyeing of wide cotton-rug fabrics up to 19 ft. wide in the piece.

Machines range from 6 to 20 ft. in width. Tubs of 14 ft. or over are supported in the center with a structural steel cradle.

A variety of spreading and centering devices can be supplied to meet individual requirements. Adjustable front-to-back partitions allow several different widths of fabric to be dyed in the same machine. This arrangement eliminates the necessity of buying several machines to accommodate different widths.

Although direct colors are usually used, it is reported that some successful work has been done with vat colors.

(N-124)



Automatic Jig Is Economical

A fully automatic jig made by Vald. Henriksen I/S Denmark and distributed by Hudson Service & Storage Corp., and Westfelt & Co., Clifton, N. J., is said to save up to 25% on materials alone. It is equipped with an electronic regulator that: reverses up to 23 ends automatically; maintains tension and regulates deviations automatically; stops and lights an alarm if anything fails to function properly; and permits one man to run four or five jigs.

(N-125)

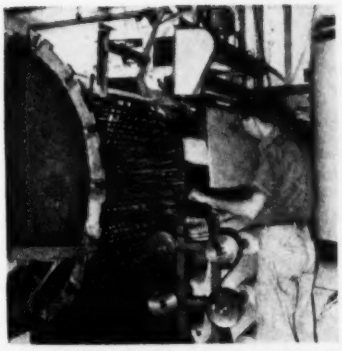
New Burnisher Brush

A new style of nylon brush, the Tiny-Tuft Metlkor, designed for color burnishing when shallow-engraving or low-viscosity colors are used, has been developed by M. W. Jenkins' Sons, Inc., Cedar Grove, N. J.

The new brush has the regular Metlkor tufted nonbleed construction, but its tufts are smaller and more closely spaced.

The brushes, set in solvent-proof plastic cement, are refillable.

(N-126)



Barotor Pressure-Dyes Cloth

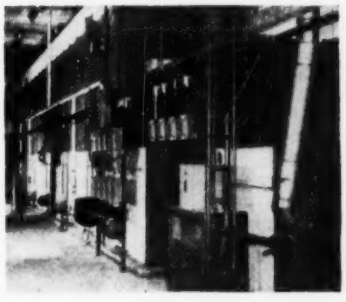
E. I. Du Pont De Nemours & Co., Inc., Wilmington, Del., has developed a new piece-dyeing pressure machine, called the Barotor, that uses a new principle of goods handling.

All the good features of jig dyeing are said to be present—open-width operation, gentle motion of cloth, absence of rope marks—plus several other desirable features that jigs don't possess.

The cloth is wound in an apparently complicated manner around the bars shown in the illustration. Gentle progressive motion of the cloth is caused by rotation of the rotor.

The entire rotor assembly is inserted into a pressure chamber after threading. Provision is made for taking samples and making dye additions without stopping the machine.

(N-127)



Print Ager Speeds Production

A new loop ager for print goods, designed and built by Proctor & Schwartz, Inc., 710 Tabor Road, Philadelphia, Pa., is said to be making an excellent production record.

This ager has increased production three to four times per operator, and floor space required has been cut in half per yard of cloth processed. Fabrics processed are of high quality and uniformity.

One mill using the ager estimates the

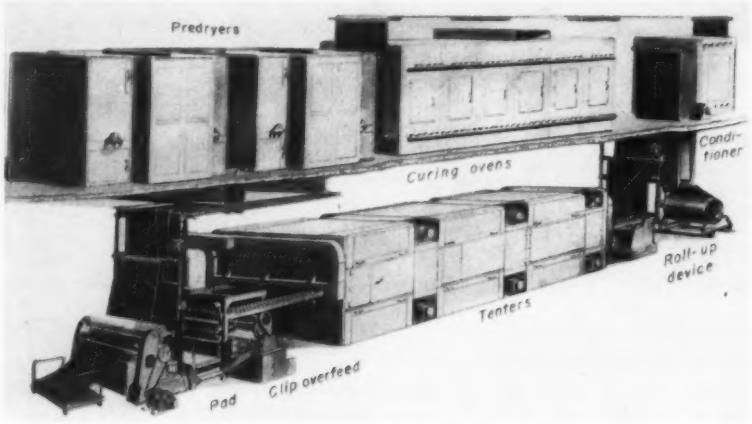
savings in labor alone will amortize the investment in slightly more than 5 years.

Vat colors on printed fabrics of various types, weights, and constructions can be aged in a steam atmosphere at a minimum rate of 180 yds. per min. when two strands of 50-in.-wide cloth are run at a speed of 90 yds. per min. per strand.

The ager can be used for a wide range of fabric types.

Uniformity is said to be excellent for the full length and width of the piece; and the danger of water spots, mark-offs, and broken selvages has been eliminated. During the critical part of the ageing cycle, the printed face of the cloth is not in contact with rolls or supports and is uniformly exposed to steam atmosphere.

(N-128)



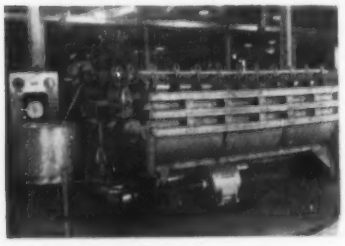
New Cloth Dryer Dries With Steam Under Pressure

A new type of dryer, called Vapojet, designed and built by James Hunter Machine Co., North Adams, Mass., under license from Julien Dungler of Basle, Switzerland, impinges superheated steam at high velocity on both sides of the fabric. Drying speeds are high.

Live steam, under presure, is used to force air from the new Vaporjet dryer. Heat is maintained at 300° F. by copper conduction-type heaters. A superheated condition of 88° F. is said to prevent over-drying and give uniform, fast operation over a wide range of fabric weights.

The first installation of the predryer and overfed tenter is in operation at Cliffside Dyeing Corp., Paterson, N. J. This complete range consists of a pad, two predryers, a three-section overfed clip tenter, a curing oven, a cloth conditioner, and a batcher. The complete process of impregnating, drying, curing, conditioning, and batching is accomplished continuously.

(N-130)



Dyeing Machines For Open-Mesh Fabrics

Open-mesh-fabric dyeing machines are being made by Burlington Engineering Co., Inc., Graham, N. C. The machines use standard package-dyeing principles to boil off, bleach, and dye marquisette or tricot.

The marquisette machine handles up to 6,000 yds. of 60-in. goods. It has a 1,000-gal.-per-min. pump and a four-way valve for flow reversal. Timers are used with the temperature controllers. Operating temperature is up to 240° F.

The tricot machine is similar to the marquisette machine, but it handles 92-in. fabrics.

Both machines are available in pressure dyeing or atmospheric-pressure dyeing models. The atmospheric-pressure machines have a continuous one-way flow.

Sampling and dye additions can be done without stopping the pump or reducing the temperature inside the unit. A 3-gal. cylinder is built into the pressure-dyeing system between the pump discharge and the return line. Samples are attached to a wire screen in the top portion of the cylinder.

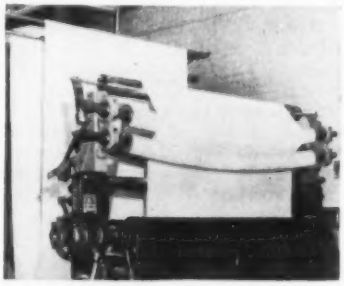
(N-129)

Spreader and Guider For Carpet Dyeing

An electrically controlled stainless-steel spreader and guider manufactured by Birch Bros., Inc., 32 Kent St., Somerville 43, Mass., can be used in the dyehouse as a conical opener in conjunction with dye kettles and in the dyeing of pile fabrics, tufted cotton carpeting, and other fabrics that are dyed in the open width.

The unit can also be used to lay fabrics flat ahead of squeeze rolls.

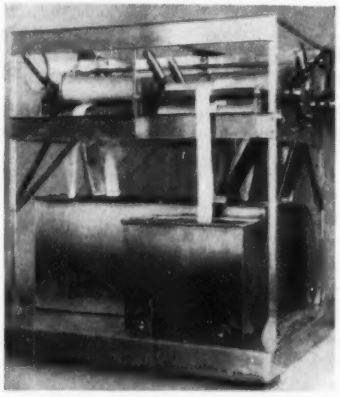
(N-131)



Cloth Evenness Assured Just Before Shearing

Under arrangement with Mount Hope Machinery Co., slack-selvage eliminators are now provided by Hermas Machine Co., Warburton Ave., Hawthorne, N. J., on its AV-4 and other knife shears. During shearing, the slack-selvage eliminators spread the cloth evenly as it is presented to the shearing knives.

(N-132)



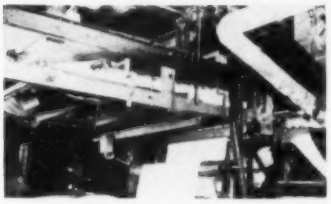
Slack Washer

A new slack washer is said to have many advantages over conventional slack washers, according to its manufacturer, Proctor & Schwartz, Inc., 710 Tabor Road, Philadelphia 20, Pa.

Self-compensating rolls keep an even amount of tubular-knit fabric in each tank, without any effort from the operator. Tapered squeeze rolls keep the tanks filled with fabric to the desired level and thus insure tension-free operation.

The washer is also adaptable for use as a saturator, desizer, or dyeing unit and can be used wherever fabrics are to be processed in liquid.

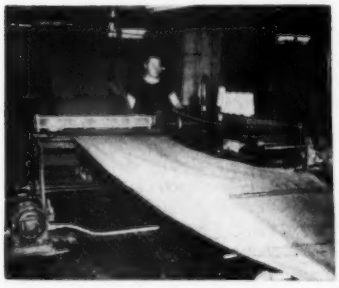
(N-133)



Cloth-Storage Scray

Any predetermined amount of cloth can be handled by an overhead horizontal cloth-storage scray built by Cook-P&N Machine Co., Inc., 365 Dorchester Ave., Boston, Mass. One model has a 500-yd. capacity and gives ample time for piecing fabric ends together without slowing down the adjoining processes. The selvage is automatically kept in alignment.

(N-134)



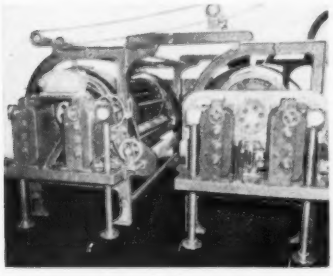
Automatic Tacker

Tacking fabrics at rates up to 300% faster than conventional hand tacking is now possible with the automatic tacker made available by Bachmann Uxbridge Worsted Corp., Uxbridge, Mass.

Speeds up to 65 yds. per min. are possible. Any style or weight of fabric up to 94 ins. wide can be handled, and cloths of varying widths and weights can be tacked.

Tacking automatically in aligned selvages is assured by electrically actuated mechanisms.

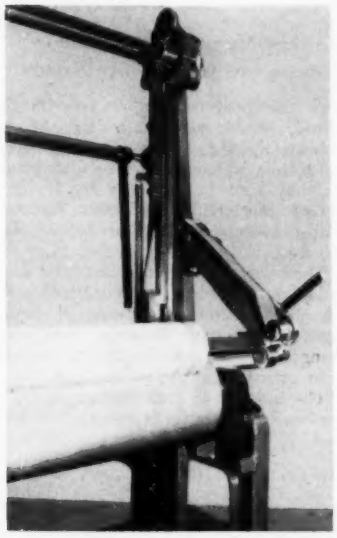
(N-135)



Tandem Napper Doubles Production

A double-acting tandem arrangement is the feature of a napping unit put on the market by David Gessner Co., 41 Fremont St., Worcester, Mass. Production is doubled, and quality is improved by positive drives on the napping rolls that permit fine adjustment of cloth tension and allow easy reversal for repeat runs.

(N-136)



Cut-off Winder Saves Material, Time, Labor

An improved Simpson cut-off winder for fast, economical winding of piece goods in widths up to 60 ins. is being offered by H. W. Butterworth & Sons Co., Bethayres, Pa. A pneumatic winder, the machine saves the cost of refinishing up to 50 yds. of cloth that is sometimes spoiled in completing one roll and beginning another.

New features consist of roller-bearing arms to hold the nearly completed roll and to release it automatically on completion of the winding operation, and splicers that start each roll cleanly and smoothly without the necessity of wetting the cloth.

The automatic winder operates at speeds up to 200 yds. per min. An optional streamlined cover protects the machine and its operator and is easily removed for adjustment, cleaning, and repairs.

(N-137)

Belgian Dye Machine Uses Controlled Pressure

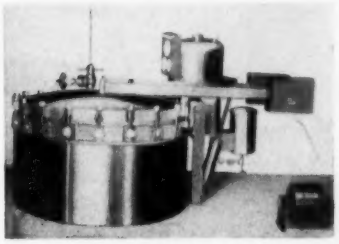
A dyeing system has been developed commercially in Belgium that: (1) controls static pressure from an outside source, independent of the internal temperature; (2) has a sampling kier that can be used at any time without shutting down the complete unit; (3) eliminates difficulties caused by high local temperatures near the stock or yarn by means of a heat-exchanger unit between the circulating pump and the dye kier; and (4) has a special low-pressure circulating pump that prevents much of the channeling and felting caused by high-pressure pumps.

Manufacturer of the system, called the Static-Process Steverlynck, is Groeninghe Ververij, Courtrai, Belgium.

Equivalent to a 100-lb. unit, the new dyeing machine will handle raw stock, yarn on packages, or tops.

A laboratory unit has all the essential features of the production machines, and a good lab-to-dyehouse match is obtainable.

(N-138)



High-Temperature Kettle Dyes Stock or Top

A new Hy-Temperature stock-dye kettle for dyeing synthetic fibers at temperatures up to 250° F. has been announced by Riggs & Lombard, Inc., Lowell, Mass. Made in standard capacities from 50 to 1,000 lbs., the unit can also be made into a combination type for handling both raw stock and top, either on jack spools or in standard ball-top form.

Improved features of the machine include insulation; an instrument panel with pressure gauges and thermometer; a heat exchanger to give a uniform volume of dye liquor with no build-up from condensate and to provide for rapid cooling at the end of a cycle; a "shading" tank that allows small quantities of dyes to be added without losing temperature or pressure; and a sampling device.

A standard part of the equipment is a 35-gal. boil-up tank—equipped with steam pipe, dart nozzle, and ejector—for feeding into a pressurized expansion chamber. The chamber provides plenty of room for dye additions or feed-ins, and nearly 100% of the dye can be exhausted from the dyebath.

(N-139)

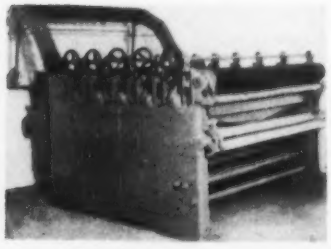
Radioactive Unit Measures Coating Thickness

At Textileather Corp., Toledo, Ohio, five beta-ray gauges continuously measure the uniformity of every yard of plastic-coated fabric as it comes out of the calenders. The radioactive Strontium-90 in the quality-control unit—called the Accuray and manufactured by Industrial

Nucleonics Corp., 1205 Chesapeake St., Columbus 12, Ohio—has a life span of 30 years and is not harmful to the material being measured or to plant personnel.

A U-shaped arm contains a capsule of Strontium-90 and a detector device. The fabric being measured passes between the arms and is thus measured inch by inch by the number of radioactive particles that pass through.

(N-140)



Sueding Machine Handles Knitted or Woven Fabrics

A Wagner sueding machine that finishes either with or against the grain is being offered by Alfred Hofmann & Co., 629-635 59th St., West New York, N. J. The machine handles Atlas, Simplex, interlock, woven, and tricot fabrics at 30 to 33 ft. per min.

(N-141)

New Selvage-Marking Machine

A new selvage-marking machine has been made available in the United States by Maag Bros. Machine Works S. A., Kuesnacht (Zurich), Switzerland, through The Trumeter Co., 1265 Broadway, New York 1, N. Y.

The Maag selvage-printing machine is capable of printing with ink or blocking with gold or colored lettering by a heat process. It will print equally well on the finest silk or the coarsest cotton cloth. Light to medium-heavy woolen goods are also successfully processed.

By means of a straight forward arrangement, the machine can be set to print every 1, 2, 3, 4, or 5 yds.

Production is dependent on the system used. With leaf blocking, a speed of 30 yds. per min. is possible; with ink printing, 40 to 60 yds. per min.

(N-142)

Blanket-Napping Machine Redesigned With Improvements

A redesigned napping machine of the 24-roll, double-acting type for use on woolen fabrics as well as on wool, wool-and-cotton, and other blended-fiber blankets, has been brought out by Davis & Furber Machine Co., North Andover, Mass. Available widths are 80, 90, and 100 ins.

The napper has a totally enclosed drive and gears. It has been improved with sensitive dial controls, elimination of charge gears, antifriction bearings, and easy changes of cloth speed while the napper is in operation.

The amount of nap applied during a run can be accurately reproduced on later runs.

(N-143)

Defect Marker Eliminates Hand Marking of Selvage

The marking of fabric defects can now be done by a fast selvage-marking machine that eliminates the downtime necessary for the hand sewing of colored yarn at the selvage. The machine, called the FM 1, is available from Stellite American Corp., 60 E. 42nd St., New York 17, N. Y.

When a defect of any kind is noticed, the inspector presses a button and a colored thread is attached, by a strong adhesive, across the selvage. The adhesive does not harm the fabric.

The machine can attach threads of four different colors. The unit is easily attached to existing inspection tables.

(N-144)

Packaged Chilling Unit Prevents Dyestuff Foaming

Equipment for a continuous and economical supply of chilled water for dyehouse use is manufactured by United States Air Conditioning Corp., 330 Como Ave., S. E., Minneapolis, Minn.

A 20-ton water chiller contains a compressor, a water-chilling section, and an evaporative condenser. The unit is operated in conjunction with a 5,000-gal. chilled-water storage tank, which spreads the load on the chiller and allows use of a smaller refrigerant unit.

Water in the storage tank is maintained at 35° F. and is piped to dye machines when low temperatures are required to prevent dyestuff foaming.

(N-145)

Butt-Seam Sewing Machine Mounted on Portable Base

A gray-room sewing machine for butt seaming is now offered on a portable stand by Birch Bros., Inc., 32 Kent St., Somerville, Mass.

In bleach houses, for example, the mobile unit can sew 140 seams per hr. on 40-in. cloth. The machine automatically marks the cloth with its lot number as the seam is made. The machine sews one seam while the operator prepares the next one.

(N-146)

Glass-Fiber Tanks Are Noncorrosive and Nonconductive

Corrosion-resistant glass-fiber tanks in special sizes that do away with the high cost of special molds have been put on the market by Laminex Corp., 994 Jefferson St., Fall River, Mass.

Sizes up to a 12-ft. length or width by 4-ft. depth are available. The tanks are straight-sided and square-cornered with pressure-bonded joints.

The tanks are noncorrosive and nonconductive and can withstand temperatures above the boiling point.

(N-147)

Multipurpose Kjeldahl Flask

Titrating, acetylating, and refluxing can all be done in a single Kjeldahl flask made convertible by a standard-taper joint. The new 500-ml. flask with a removable neck has been announced by Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa. Titrations can be made right in the bulb of the digestion flask.

(N-148)

(Continued on page 234)

Fog-Generating Machine Mothproofs Wool Stock

An electrically driven fogging unit has been introduced by Combustion Equipment Div., Todd Shipyards Corp., Elmhurst, L. I., N. Y. The portable fog generator mothproofs wool stock, either loose in bins or bound in bales.

Known as the Tifa 15-M unit, the apparatus on wheels operates from a 110-v. a.c. outlet. It is safer and easier to operate indoors than the standard gasoline model.

The mothproofing solution is drawn through a hose by a pump that feeds it into the fog head. There it passes through a mechanical atomizer. Price: $1,300.

(N-175)

Adjustable-Speed Drive Operates at 75 to 2,300 Rpm.

An all-electric adjustable-speed drive in ¾-, 1-, 1½-, 2-, and 3-hp. ratings has been announced by Reliance Electric & Engineering Co., 1088 Ivanhoe Road, Cleveland 10, Ohio.

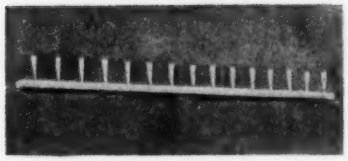
Stepless adjustable speeds from a.c. circuits are provided to give constant torque. The unit operates at speeds of 270 to 2,300 rpm. and at speeds as low as 75 rpm. for setting-up operations, light loads, or intermittent duty. Components are a drive motor, the operator's control station, and the control unit.

(N-176)

New Thread Guides

Heanium, a wear-resistant material of extreme hardness and chemical inertia, has been developed by Heany Industrial Ceramic Corp., 915 Whitney Ave., New Haven, Conn., for thread guides, compressors, rolls, and eyelets. Guides made with the new material are reported to outlast other materials by as much as two to six years. Most acids have no effect on the material.

(N-177)



Electrostatic Neutralizer Is Safe and Economical

A self-energizing induction neutralizer, called The Magic Wand, has been introduced by Herman H. Sticht Co., Inc., 27 Park Place, New York 7, N. Y. It needs no external source of power.

Advantages of the neutralizer are: low cost, small space, no electricity, no health hazard, long service life, no maintenance cost, no sharp points to injure stock or employees, effective neutralization of static at any processing speed, and low electrostatic capacitance.

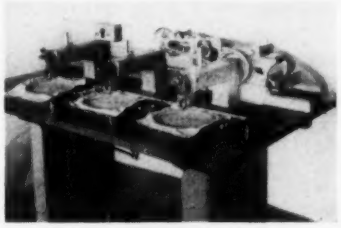
(N-178)

Needle-Bar Slot Miller

A newly designed slot-milling machine for milling knitting-machine needle bars has been made available by George Scherr Co., Inc., 200 Lafayette St., New York 12, N. Y. The machine will make needle-bar slots with automatic indexing from slot to slot at a great saving in time and with the close accuracy that is always required.

The bed, with cabinet legs, is of rigid construction and firmly connected to the cutter-head mechanism and the cooling-solution tank. The work table glides on V-shaped guides, well supported over its length. The table has eight T-slots for fastening the holding fixture for the bar being cut.

(N-179)



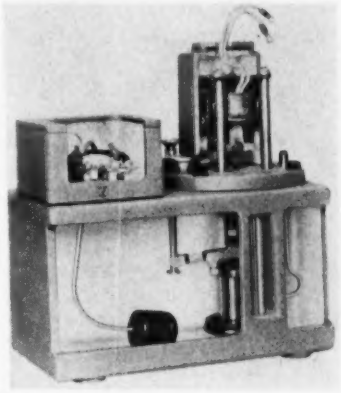
Jacquard Embroidering Machine

A three-headed jacquard-controlled embroidering machine that permits direct embroidering with no prior sewing on of patterns has been made available in the U. S. through Robert Reiner, Inc., 556 Gregory Ave., Weehawken, N. J. The unit is manufactured by Carl Zangs A. G. in Krefeld, Germany.

Size of the embroidery field is approximately 8x10 ins. Output is 250 stitches per head per minute (750 stitches total). One operator can handle from six to nine heads. The machine works on all types of yarn and fabrics.

Among the embroidery types possible on the machine are broad, back, chain, cross stitches, Madras, Toledo, and several others.

(N-180)



Lubrication Is Independent Of Machine Motions

A new solenoid-operated lubricator that can be applied to almost every type of machine and mounted in any location has been developed by Bijur Lubricating Corp., 151 West Passaic St., Rochelle Park, N. J. No connection to a moving element of the machine is required.

Flexibility of control is made possible by the use of switches tripped by rotary or reciprocating motion, existing circuits, electric timer controls, or push buttons.

The new lubricator delivers 0.8 cc. (24 drops) to 0.2 cc. (6 drops) of oil per stroke. The maximum frequency of operation recommended is four strokes per minute.

(N-181)

Automatic Doors Come in Packaged Unit

Prest-O-Matic doors, built in bi-fold, single-sliding horizontal, and double-sliding horizontal types, have been made available to textile mills by Clark Door Co., 507 Hunterdon St., Newark 8, N. J. Stock in process is said to be delayed less and optimum relative-humidity conditions maintained more easily with the inside doors.

The complete unit is operated by an

electric motor, with an approach pull cord, electric eye, or floor plate controls. A fast-operating cycle curtails loss of heat in wintertime and conserves humidity.

A feature of the automatic doors is that they come complete, ready for installation by any plant crew.

(N-182)

Improved Static Detector

A new static detector for use in textile mills has been developed by Kiethley Instruments, 3868 Carnegie Ave., Cleveland 15, Ohio. The unit consists primarily of two concentric telescoping tubes and a center aluminum rod. It can be affected by a charged pocket comb held 10 ft. away.

The instrument is an accessory for the company's standard vacuum-tube Electrometer.

(N-183)

Butted-Seam Sewing Machine

A portable butted-seam sewing machine for making ⅜-in. seams from one thread has been brought out by Standard Mill Supply Co., Box 1534, Providence 1, R. I. The machine operates at 1,500 stitches per minute. The head is easily threaded and no tension device is necessary. A cutting mechanism automatically trims off waste edges of the goods going through.

(N-184)

Nickel-Plating Process

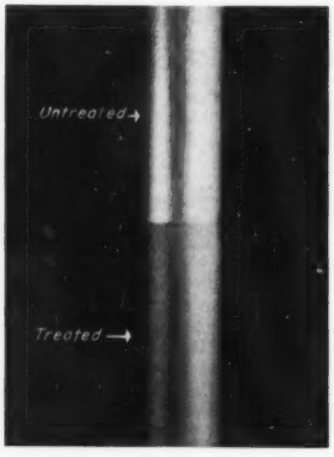
Kanigen, a new type of nickel plating that requires no electrical equipment and that has few limitations on its possibilities, has been developed as a modern plating process by General American Transportation Corp., 135 S. LaSalle St., Chicago 90, Ill.

(N-185)

New Nylon-Lined Bearings

A new type of nylon-lined bearing has been developed by Thompson Industries, Inc., Manhasset, N. Y. The bearing consists of a thin, draw-steel outer sleeve and a free-floating liner of Du Pont FM-10001 nylon. Called Standard Thinwall Nylined bearings, they are being offered initially in 10 sizes ranging in inner diameters from ¼ to 1¼ ins.

(N-186)



Metal-Finishing Process Reduces Yarn Friction

Vapor blasting, the bombardment of a metallic surface with an abrasive material suspended in water, has been made available as a mill-shop operation by Vapor Blast Mfg. Co., 3025 W. Atkinson St., Milwaukee, Wis. Called "liquid honing," the metal-treating process gives a low-friction surface finish of controlled uniformity to such items as spinning rings, tension disks, loom reeds, turning rods, pigtail, and steel twisting rings.

The process has no measureable effect on the dimension of the piece treated. Tests show that dimensions within 0.0001 in. are not disturbed by liquid honing. Various finenesses of abrasives are used as required.

(N-187)

Lubricator Aids Overseaming Of Plastic-Lined Materials

A lubricating presser foot for overseaming and overedging machines, manufactured by Merrow Machine Co., 2803 Laurel St., Hartford, Conn., reduces friction between the material and the presser foot and improves the feeding of certain materials. The device is said to give good results on plastic-lined articles such as tablecloths, costumes, and infants' pants.

The lubricant is supplied to the presser foot by a collector clip to catch the lubricant from the reservoir and a resilient blade to spread it on the material being sewn.

(N-188)

Large Steam Cleaner

A new steam cleaning machine, capable of discharging up to 540 gals. per hr. of hot- or cold-pressure rinse, has been announced by Clayton Mfg. Co., El Monte, Calif. The new unit is said to offer virtually double the cleaning capacity of standard steam cleaning equipment.

Equipped with a 60-gal. detergent-concentrate tank and a 40-gal. fuel tank, the BOE-600S cleaner can operate for 4 hrs. continuously at maximum load and for many additional hours at lesser loads without replenishment of the detergent or fuel supplies.

The atomizing burner system operates on kerosene, fuel oil, distillates, or gasoline. An accurate metering device maintains the detergent-water ratio.

(N-189)

Fire Extinguisher

Deviating from its standard 10- and 15-lb. sizes, Randolph Laboratories, Inc., 8 E. Kinzie St., Chicago, Ill., has produced a new, portable 12-lb. carbon-dioxide fire extinguisher with additional fire-fighting capacity.

The new "12" is a compact, lightweight unit, 11 ins. wide and 24 ins. high. It has a thumb-trigger release and a lightweight nozzle.

(N-190)

Ratchet-Lever Hoist Operates in Any Position

The new Model-R coil-chain ratchet hoist, developed by Coffing Hoist Co., Danville, Ill., uses coil instead of roller chain to permit the chain to swing or wrap easily in any direction. When not under load, the chain can be pulled freely through the hoist head for quick adjustment.

The load is suspended on a ratchet and pawl at all times and no friction brake is needed. It will not slip, and the holding mechanism will not freeze.

The handle operates in any position and can be operated with either partial or full strokes. Safety stops keep the handle from spinning.

(N-191)

Keyway Cutter Needs No Bushings

A welded-steel-construction keyway-cutting machine that cuts keyways from ⅛ to 1 in. has been put on the market by Sunray Co., Box 455, Spartanburg, S. C.

Called the Sunray Keyseater, the new cutter is regularly equipped to handle heights up to 8¼ ins. The length of cut with a 20-in. cutter is 8¼ ins. and with the 16-in. cutter, 4 ins.

(N-192)

New Thread Guide

American Lava Corp., Manufacturers Rd., Chattanooga 5, Tenn., has announced the development of a harder and stronger material for thread guides. Diamond is said to be the only material that will retain its original finish for a longer time than AlSiMag 13.

(N-193)

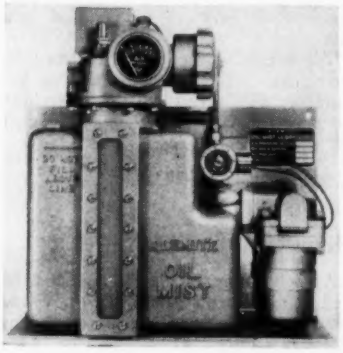
New Sewing-Machine Pedestals

Two new types of pedestal mountings for industrial sewing machines have been announced by Union Special Machine Co., 400 N. Franklin St., Chicago 10, Ill.

One type, intended for tubular operations, positions the machine so that it overhangs the pedestal base to allow handling of tubular-knit fabric around the bed of the machine. No board or tray is required.

With the second type of pedestal, the sewing head is installed on the base instead of overhanging it. Various types of table boards can be used as needed.

(N-194)

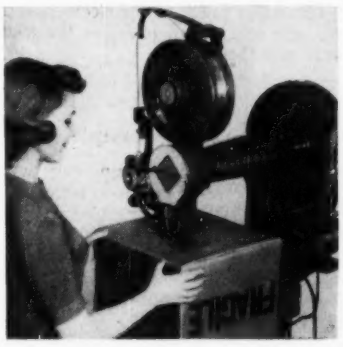


New-Model Lubricators

Oil-Mist lubricators with 1-gal. oil reservoirs and automatic low-supply warning switches are being made by Alemite Div., Stewart-Warner Corp., 1826 Diversey Pkwy., Chicago 14, Ill. Units with 12-oz. reservoirs are also available with built-in warning switches.

The new models further reduce dependence on the human factor in automatic lubrication.

(N-195)

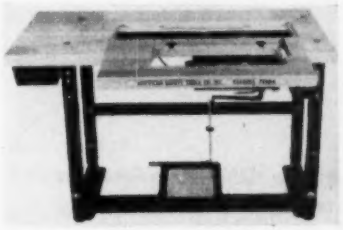


Carton Stitcher Uses Light Wire

Arculate wire stitching, a new carton-stitching method developed by Acme Steel Co., 2840 Archer Ave., Chicago 8, Ill., takes regular flat stitching wire, puts an arc into it prior to the stitch-forming operation, and then drives the stitch at a high speed.

The arc shape of the wire gives these stitches higher column strengths; so the stitches are made from lighter-gauge wire. A saving in wire cost results.

(N-196)



Sewing-Machine Changeovers Speeded by New Table

To aid sewing rooms in their search for additional flexibility, American Safety Table Co., Inc., 721 N. 8th St., Reading, Pa., has developed its Amco Uniflex table.

The top of the stand is in two parts: a permanent table board cut to accommodate an insert, and a removable insert. The operator simply slides out the insert section of the table top with the machine attached and slides in another insert to which a different machine is attached.

(N-197)

Steam-Jet Cleaner

A steam-jet cleaner that is said to be five times as efficient as ordinary manpower on machinery-cleaning jobs is manufactured by Livingstone Engineering Co., 100 Grove St., Worcester 5, Mass.

The rapid cleaner operates on 220-440-, or 550-v. a.c. power. Operation of the steam generator, regulation of detergent flow, and atomization with steam at the jet are all controlled at the operator's fingertips.

Cost of running the unit usually amounts to 40 or 50¢ an hour.

(N-198)

Flooring-Marking Applicator

A lightweight applicator for applying lane-marking tape to industrial and commercial floor areas has been announced by Minnesota Mining & Mfg. Co., 900 Fauquier St., St. Paul 6, Minn. The unit is designed to semiautomatically apply strips of plastic film tape to mark trucking lanes, aisles, storage areas, and safety zones on floors. Price is $24.

(N-199)

30-Lb. Hanging Scale

A multipurpose hanging scale with a capacity of 30 lbs. has been brought out

by Toledo Scale Co., Laskey & Telegraph Road, Toledo 1, Ohio. The scale has an air-cylinder pointer return and 13¾-in. dials on the front and back.

(N-200)

Portable Unit Homogenizes 5 to 7 Gals. per Min.

A portable homogenizer that homogenizes liquids at 5 to 7 gals. per min. is available from American Ultrasonics Co., 198 Pacific St., Newark, N. J. The homogenizer, known as the Rapisonic, weighs 130 lbs. and mechanically breaks down suspended particles with ultrasonic waves.

The homogenizer has a blade that vibrates at 22 kc., and a jet of the liquid is propelled against this blade at 200 psi. The vibration frequency of the blade is adjustable.

Features are said to be fast emulsification, low power consumption, portability, and low initial cost.

(N-201)

Adjustable Clamp Wrench

An easy-to-use hand wrench that gives positive clamping action adjustable to 2,000-lbs. pressure has been developed by Clamp Wrench Co., 154 59th St., West New York, N. J.

The clamp wrench maintains parallel jaws through the entire range of adjustment.

(N-202)

Five-Unit Magnetic Starter

A new magnetic starter manufactured by Cutler-Hammer, Inc., 312 N. 12th St., Milwaukee 1, Wis., has a five-unit construction: two contact blocks, a magnetic coil, an armature, and a three- or two-coil overload relay mounted on a steel panel. Each part can be removed as a unit.

The wrap-around cover pulls off to fully expose the front and both sides of the starter for 180° accessibility. All terminals are angled to face front and have solderless vice-grip connectors.

(N-203)

Viscosity Indicator

An indicating instrument (without recording equipment) to measure the viscosity of solutions has been developed by Norcross Corp., 247 Newtonville Ave., Newton 58, Mass.

(N-204)

Worm Take-Off Drive Fits ⅜-In. to 1-In. Shafts

A small right-angle worm drive for knitting and other textile machines where a worm take-off drive is required has been announced by Durant Mfg. Co., 1929 N. Buffum St., Milwaukee 1, Wis. It is designed to fit shafting of ⅜- to 1-in. dia.

The drive has no external projection of the worm beyond the small housing. The entire assembly can be placed on the shafting and closed in with bearings without disassembling or drilling the shaft. An Alemite grease fitting is provided.

(N-205)

Three New Sewing Machines

Three industrial sewing machines were recently introduced by Pfaff Industrial Sewing Machine Corp., 820 Greenwich St., New York, N. Y.

The flat-bed machine, designed for high-speed operation with one or two needles, has a compound feed and alternating pressers. A hook helps build uniform stitches, no matter what type of thread is used.

The single-needle lockstitch machine has a completely automatic lubricating system, a fully enclosed bed-plate with built-in oil pan, a suction pump to remove surplus oil from head parts, a speed of 5,500 stitches per minute, and a rotary hook.

The double-lockstitch bar-tacking ma-

(*Continued on page 248*)

7 Materials handling 7

High-Lift Pallet Truck

A new 4,000-lb.-capacity, high-lift pallet truck has been added to the Worksaver line of motorized hand trucks of Yale & Towne Mfg. Co., Roosevelt Blvd., Philadelphia 15, Pa. It is designed to transport and stack skid bins or single-face pallets up to heights of 120 ins. The truck has side caster wheels for stability and constant floor contact under all operating conditions. Pallet forks are used to give a minimum over-all truck length. The lowered fork height accommodates single-face pallets.

(N-212)

Magnets for Doffer Trucks

A new doffer-truck magnet has been developed by Eriez Mfg. Co., 1945 Grove Drive, Erie, Pa., for picking up light pieces of tramp iron as the truck moves around the textile mill. The permanent magnet is attached to the under side of the doffer truck and collects traveler rings and other small pieces as the truck passes over them.

(N-213)

Portable Loading Ramp

A portable loading ramp unit with push-button control has been introduced by John B. Illo Engineering Co., 2414 E. 57th St., Los Angeles 58, Calif.

The hydraulically operated dock lift adjusts to any truck-bed height in a few seconds so that fork trucks can be driven right into trailer trucks.

(N-214)

Easier Caster Swiveling Obtained by Double Races

New 5- and 6-in. casters featuring double ball-bearing swivel action for easier handling of movable equipment have been added to its "68" series of casters by Bassick Co., Bridgeport, Conn. The new casters feature fully casehardened raceways for extra durability and service life.

The new casters are recommended for trucks and other miscellaneous portable equipment for loads up to 1,400 lbs. Treads are soft rubber.

(N-215)

Stand-Up Fork Truck Designed for Close Quarters

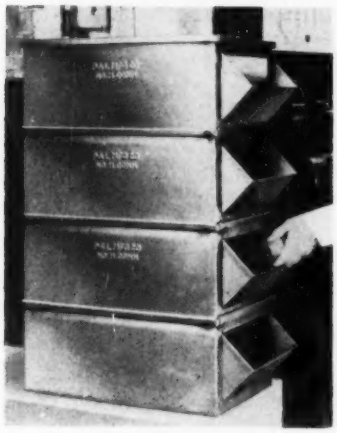
An electric stand-up fork truck, the Stoway, which can operate within its own length by means of a 60° turning radius and 360° steering has been announced by Clark Equipment Co., Battle Creek, Mich. The new truck is designed for warehouses and terminals, where close quarters and narrow aisles demand high ma-

neuverability and where the driver must continually mount and dismount. It has a capacity of 2,000 lbs. at 24 ins., 2,500 lbs. at 15 ins., and 1,650 lbs. at 30 ins.

Travel speed is 6½ mph. empty and 6 mph. loaded, with four speeds forward or reverse.

Telescopic uprights are available in sizes ranging from 72 to 132 ins. maximum fork height. Uprights with 47½ to 64 ins. of free lift with no increase in over-all upright height are optional at extra cost. An 18° spread—4° forward and 14° backward—provides a greater-than-normal tilting range.

(N-217)



Tote Box Has Open End

An open-end hopper box with stacking features has been added to its regular line of sheet-metal tote boxes by Platt & Labonia Mfg. Co., 70 Broadway, North Haven, Conn. The hopper-opening feature combined with the stacking arrangement allows easy access to the material in all boxes while they are stacked one on top of another.

(N-218)

Roll- or Beam-Handling Truck

A new floor truck for heavy calender-roll or beam handling up to 15,000-lb. capacity has been built by Lewis-Shepard Products, Inc., 125 Walnut St., Watertown, Mass. Suited to a wide variety of applications, the truck is ideal for operations where the movement of any heavy and long rolls, beams, or cylinders is involved.

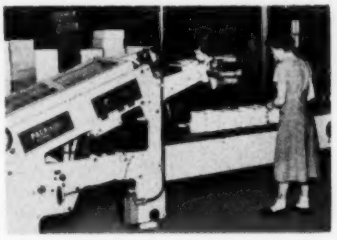
(N-219)

Tilting Fork Stackers

Telescopic tilting fork stackers in four base capacities (1,500, 2,000, 2,500, and 3,000 lbs.), all rated at a 24-in. center line of load, have been brought out by Clark Equipment Co., Industrial Truck Div., Circle Drive, Battle Creek 27, Mich.

The trucks provide maximum utility for operation in narrow aisles.

(N-220)



Wrapping Machine Requires Only One Operator

Package sizes from 4 to 16 ins. in length, 2 to 9½ ins. in width, and ⅜ to 5¼ ins. in height can be accommodated on a new textile wrapping machine produced by Package Machinery Co., East Longmeadow, Springfield, Mass.

Goods may be on flat cards, trays, or in cartons, and they may be wrapped without any card at all. Either plain or printed wrapping material may be used.

The machine has a self-measuring wrapping-material feed. A single hand wheel sets the machine for size before the beginning of the run.

(N-221)

False-Bottom Hamper Lifts Load

A false bottom for canvas trucks, baskets, and hampers offered by W. T. Lane & Bros., Inc., Poughkeepsie, N. Y., automatically keeps work at rim level. Called Automatic Lift, the false bottom is suspended from the rim of the container by tension springs.

When work is loaded into the basket, the false bottom descends because of the load weight; as work is taken out, the bottom rises. The worker does not have to bend over and reach into the basket to empty it.

(N-222)

Switch Rollers Lend Flexibility

New turntables for use with its line of rollers and gravity wheel conveyors have been announced by Sage Equipment Co., 31 Essex St., Buffalo 13, N. Y. The turntables permit products conveyed on straight sections to be diverted to any angle or pass straight across the turntables.

The roller or wheel conveyor sections are mounted on large, easy-to-rotate casters that turn these sections on a circular flat-steel plate.

(N-223)

Lift-Truck Coupling

Automatic couplers to attach to its line of lift trucks and trailers are being made by Towmotor Corp., 1220 E. 152nd St., Cleveland, Ohio. Installed as replacements for standard towing eyes, the couplers speed the pickup and release of trailers used with Towmotor units.

(N-224)

Gas Lift Truck

An automatic transmission called the Hydrator's drive has been announced by Clark Equipment Co., Battle Creek, Mich. No gear shift and no clutch or clutch pedal are needed.

Because the drive eliminates gear clashing during shifting, maintenance requirements are reduced. Additional features include smoother acceleration, more-positive driver control at all times, effortless changeover from forward to reverse to forward, and controlled inching.

(N-225)

Drawn-Steel Wheels Take Double the Load

Operating loads up to 2,000 lbs. per caster are possible with the 4-, 5-, and 6-in.-dia. drawn-steel wheels developed by Faultless Caster Corp., 1521 North Garvin St., Evansville, Ind. The load rating is nearly double that of cast wheels.

The flat tread of the new wheels withstands shocks from rough flooring, thresholds, and curbs. A snug-fitting dust cap keeps out dirt and retains the lubricant in the bearing.

(N-226)

Swivel Arm and Scale

A combination swivel arm and scale that weighs bales, crates, or cartons while they are being transferred, stacked, or inventoried has been announced by W. C. Dillon & Co., Inc., 14,620 Keswick St., Van Nuys, Calif.

The device consists of a steel arm that has been welded to the mechanism at the front of the truck. This arm revolves in a wide arc and can be locked as desired. Out on the end of it, a hook engages the Dillon weight indicator.

The weight indicator has a 16-in.-dia. dial, a ball-bearing swivel hook, and rapid adjustment for tare. Numerous capacities are available.

(N-227)

Aluminum-Frame Gravity Conveyor

A steel-wheel aluminum-frame gravity conveyor that combines strength with lightness has been announced by Rapids-Standard Co., Inc., 342 Rapistan Bldg., Grand Rapids 2, Mich. The model is designed to be a highly portable conveyor that has the durability to stand up under heavy loads.

The conveyor is manufactured in 45° and 90° curves; 5-, 8-, and 10-ft. lengths; and 12- and 18-in. widths.

(N-228)

Narrow-Aisle Lift Truck

Narrow aisles, troublesome corners, and other restricted areas are no materials-

handling problem for a 34½-in.-wide lift truck made by Clark Equipment Co., Battle Creek, Mich.

The pneumatic-tired truck has a 2,000-lb. capacity.

Twin double-acting tilt cylinders assure smooth tilt action and upright stability.

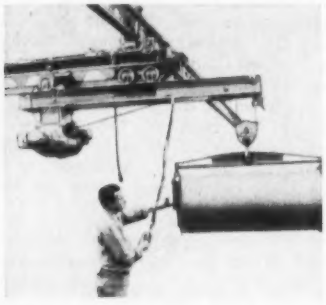
Honed cylinder surfaces give a positive seal and long packing life.

A convenient instrument panel includes all recording dials, the ignition switch, and a starter button.

A quick-change clutch, standard on most larger models, is another improvement in the Yardlift 20.

Turning radius is 71⅛ ins., and the truck length is just 1 in. more.

(N-229)



Overhead Carrier Reaches Beyond End of Crane

A new-type overhead carrier with a cantilever arrangement that permits the unit to handle loads beyond the end of the crane on which the carrier operates has been developed by Cleveland Tramrail Div., Cleveland Crane & Engineering Co., Wickcliffe, Ohio.

The carrier, with a capacity of 1,500 lbs., has been designed to take care of handling of materials in areas between roof-supporting pillars that cannot normally be covered by cranes, and also for reaching through doorways.

The extension feature of the carrier permits the hoist to reach out more than 2 ft. beyond the end of the crane. When it is necessary to travel the crane for some distance on its overhead runway, the carrier can be moved back away from the crane end to permit safe clearance of any nearby columns.

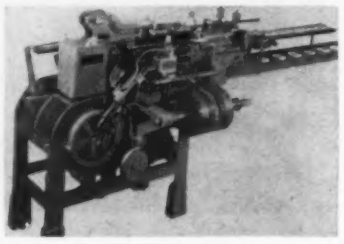
(N-230)

Maneuverable Hand Truck

A new low-lift hand truck of 4,000- to 6,000-lb. capacity is being made by Lewis-Shepard Products, Inc., 125 Walnut St., Watertown, Mass.

The new truck gives twice the power in 15% less headroom than former models. Greater power is thus provided for ramps and grades, while the amount of space needed by an operator for maneuvering has been reduced.

(N-231)



Wrapping Machine

A new wrapping machine that wraps material about the product by means of a new tight-and-loose wrapping attachment has been developed by Hayssen Mfg. Co., 1305 St. Clair Ave., Sheyboygan, Wis.

The new machine wraps material on flat cards, scored cards, U-boards, or trays.

(N-232)

No Clutch or Gear Shifting In This Gas-Electric Truck

A gas-powered industrial truck with electric transmission was introduced recently by Automatic Transportation Co., 149 W. 87th St., Chicago, Ill. The truck features an electric infinite-step transmission that eliminates the need for torque converters, clutch, overdrive mechanisms, and gear shifting.

(N-233)

Beveled-Edge Hand Truck Makes Loading Easier

A hand truck with a more convenient and rugged handle mounting and a beveled nose that slides under materials easily has been announced by Rapids-Standard Co., Inc., 342 Rapistan Bldg., Grand Rapids, Mich. Loads up to 500 lbs. can be handled.

(N-234)

Improved Fork-Truck Drive

A new three-speed transmission and fork-mounting plate assembly have been incorporated in the improved Yardlift-60 fork truck, according to Clark Equipment Co., Industrial Truck Div., Circle Drive, Battle Creek 27, Mich.

Speed ratios between the first, second, and third gears at gear-changing speeds are considerably less than with a two-speed transmission. This arrangement results in smoother, easier shifting and greater power.

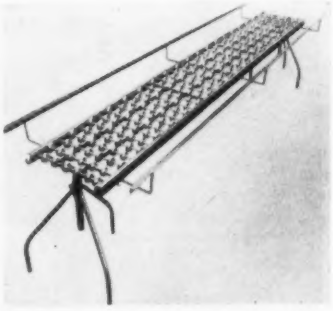
(N-235)

Hand Lift Truck Handles Pallets and Skids

A hinged superframe made for its hydraulic Jacklift truck makes it possible for Lewis-Shepard Products, Inc., 125 Walnut St., Watertown, Mass., to offer the same truck for handling materials on both pallets and skids.

When this frame is in the lower position, the truck will operate with skids like any hydraulic platform type. The frame can be made to accommodate any skid underclearance. When the frame is swung up, it is automatically secured into place and is well out of the way for pallet handling. None of the length of the pallet forks is lost when the frame is not in use.

(N-236)



Gravity Wheel Conveyors

A new line of gravity wheel conveyors with adjustable guard rails has been announced by Sage Equipment Co., 31 Essex St., Buffalo 13, N. Y.

The guard rails are adjustable up to 5 ins. on each side, and the adjustments are easily and quickly made by hand screw clamps.

Standard conveyor widths are 12, 14, 18, and 24 ins., with 6 to 36 wheels per foot.

(N-237)

Handle Drums Without Pallets

A new, automatic attachment for drum and barrel handling with gasoline and electric fork trucks is available from Yale & Towne Mfg. Co., Roosevelt Blvd., Philadelphia 15, Pa.

The new Marvel Lift-o-Matic attachment handles any drum, regardless of head or rim size. It can be attached to any Yale fork truck in a few minutes by a truck operator. No additional controls are required.

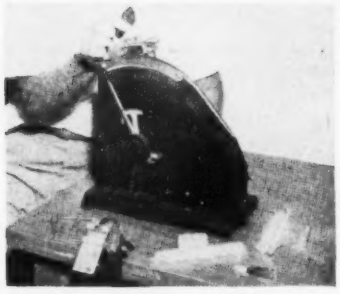
Drums can be tiered or removed at maximum fork height without the use of pallets, and drums can be picked up and spotted in close position. More than one attachment can be mounted on a truck for the multiple handling of drums.

(N-238)

Two New Lift Trucks

Two new fork-lift trucks have been announced by Hyster Co., 2902 N. E.

(Continued on page 250)



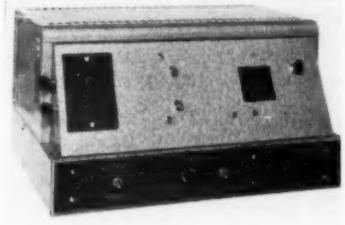
Stelometer Measures Cotton Properties

A new instrument for measuring both tensile (breaking) strength and elongation (stretch) of small tufts of cotton fibers has been developed by the University of Tennessee Fiber-Research Laboratory in Knoxville, under a research contract sponsored by the U.S. Department of Agriculture.

The new tester, called the Stelometer, has the advantage over previous fiber testers of measuring both tensile strength and the elongation of stretch obtained prior to break. Since fiber elongation is an important factor in the ability of fabrics to stand hard wear, the tester should prove valuable in selecting cottons especially suited to this use.

The Stelometer features improvements in speed of operation and accuracy of results that are essential in routine testing of raw cotton at a mill.

(N-242)

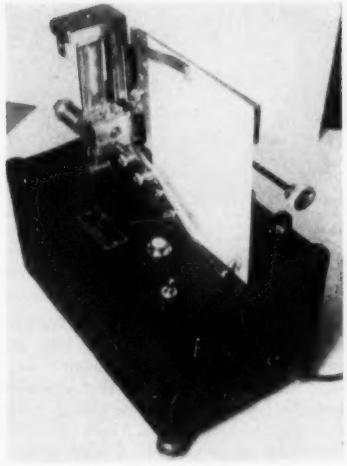


Electro-Mechanical Integrator Speeds Lab Test Results

An automatic electro-mechanical integrator that measures the time integral of any d.c. input function has been developed for textile research laboratories by Instron Engineering Corp., 2 Hancock St., Quincy 71, Mass. The instrument speeds the integration of stress-strain curves, the analysis of graphical data, continuous-process weighing, and the determination of total water content.

Two other uses are "totalizing illumination," applicable for weathering or fading tests, and the integration of two independent variable signals with respect to each other (X-Y integration independent of time).

(N-243)



Flat-Bundle Fiber Tester Applies Constant Rate of Load

A new 15x9-in. fiber tester for the tensile testing of cotton fibers in flat bundles has been developed by Scott Testers, Inc., 95 Blackstone St., Providence, R. I. Known as the Clemson flat-bundle fiber tester (devised by Dean Hugh M. Brown of Clemson College), the new instrument yields testing results that are less variable, more comprehensive, and more significant than have been possible before.

Advantages of the tester are:

1. It applies a constant rate of load to the sample.
2. The sample gauge length can be varied from 0 to 10 mm.
3. The unit, motor driven, can give either a single tensile test or perform in continuous hysteresis cycles.
4. Breaking load and elongation are recorded instantly without lag.
5. A permanent record, reading in grams, is produced for reference and filing.

(N-244)

Tensile Tester Has Load Range From 5 Gms. to 5,000 Lbs.

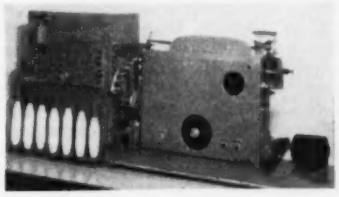
A new electro-hydraulic tensile tester with a rigid crosshead and with strain gauges for load measurements has been brought out by Thwing-Albert Instrument Co., Penn St. at Pulaski Ave., Philadelphia 44, Pa. Full-scale load ranges from 5 gms. to 5,000 lbs. are available in this model.

The hydraulic drive system provides constant rates of elongation that are infinitely adjustable on a throttle dial. No gear changing is required. The drive system has low inertia and does not overshoot at high speeds.

Rates of extension from 0.1 to 20 ins. per min. are standard. Special ranges up to 250 ins. per min. can be provided. The return-stroke speed is independent of the pulling speed.

The electronic recorder and controls are in a separate movable cabinet.

(N-245)



Yarn-Strength Tester Records and Averages

The Autodinamograph, an instrument for the simultaneous testing of strength and elongation of cotton, rayon, synthetic, and woolen yarns, is now available from Stellite American Corp., 60 E. 42nd St., New York 17, N. Y. The new tester has places for seven bobbins to be handled at a time, 10 tests per bobbin. The unit automatically records strength in grams on a bar-type chart and the average of each bobbin after every 10 samplings.

It is constructed with a 20-in. distance between the two clamps, according to the ISO standard yarn-testing setup.

The tester makes it easy to obtain over-all averages of both strength and elongation of yarns for comparative purposes and coefficients of variation.

(N-246)

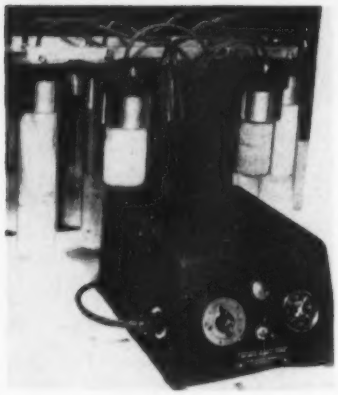
New Panel Indicator

A new ribbon-type panel indicator has been announced by The Foxboro Co., Foxboro, Mass. The Model 50 Consotrol indicator is suited to panel applications that require continuous indication of valve position or variables such as liquid level.

The indicator receives pneumatic measurements from a transmitter located at the process. This force is applied to a sensitive receiver bellows that, through a lever and stainless-steel tape arrangement, rotates two lightweight drums.

The indicator scale measures $\frac{3}{4}$x4$\frac{1}{4}$ ins.

(N-247)



Celanese Wrinkle Tester Gives Results in an Hour

The Celanese wrinkle tester evaluates the resilience and wrinkle behavior of fabrics under conditions similar to actual use. The tester has been put on the market by Custom Scientific Instruments, Inc., Box 170, Arlington, N. J.

Two sets of fabrics are alternately wrinkled and relaxed by rubber diaphragms and an air system. This cycle can be set for 2½ or 5 mins. The over-all duration of the test can be varied.

The tester produces results on 10x10-in. swatches in an hour. Evaluation of the results is visual. Price: $850.

(N-248)

Shadowgraph Records Yarn Appearance

The Vitno winder, which has five pairs of interchangeable grooved rollers over which yarn is wound for visual-evaluation purposes, has been put on the market by Handelsafdeling N. V., G. Dikkers & Co., Hengelo, The Netherlands. Each set of rollers automatically winds certain yarn numbers with their ASTM-approved traverse.

Shadowgraphs of the yarn are made on photographic paper, and the graphs can be filed away for reference purposes.

(N-249)

Single Instrument Controls Dyeing Time and Heat

Complete electronic instrumentation for the control of batch-dyeing time and temperature schedules is available in a single instrument, the Dynalog CycleLog controller made by The Foxboro Co., 26 Neponset Ave., Foxboro, Mass. The new instrument employs the Dynalog measuring system, which is designed for speedy response, flexibility, and maintenance simplicity.

Installed with inexpensive, standard, three-conductor lead wire, the instrument can be located up to 1,000 ft. away from the dye kettle if necessary. Temperature-range changes are quickly made on location by exchanging range coils and the rate-of-rise dial.

The operator can set up an automatic dyeing cycle in less than 10 secs. All control adjustments are made from the front of the instrument case, where the setting knobs, operating buttons, and signal lights are mounted. There is no cam mechanism. By pressing the power button, setting the knobs, and then pressing the Start button, a complete dyeing schedule can be set in motion.

(N-250)

Improved Fiber Microtome

An improved fiber microtome that makes possible the rapid preparation and study of sections of fibers and yarns as thin as 10 microns has been put on the market by Micro Instrument Co., 80 Trowbridge St., Cambridge, Mass. Readings from the micron scale can now be taken from the front of the instrument without the operator having to move his position.

The instrument is available in two models: a 0.031-in. circular aperture and a 0.125x0.15-in. aperture. Cost of either is $82.50.

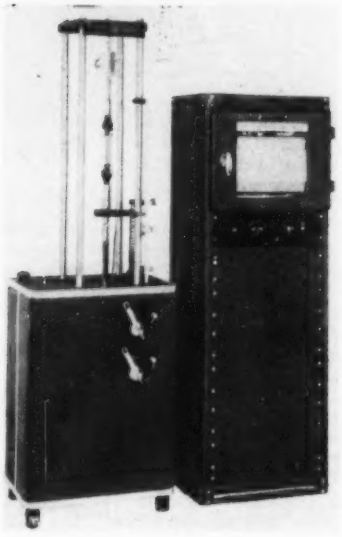
(N-251)

Recording Fiber Tester

A machine has been developed by the Wool Industries Research Association in Britain for semiautomatic measuring and recording of the lengths of single fibers of wool, rayon, and other fibers. The machine is available in the U.S. from Stellite American Corp., 60 E. 42nd St., New York 17, N. Y.

The machine comprises two elements, the measuring unit proper and an auxiliary counter.

(N-252)



Tensile Tester Shows Constant Elongation Rate

A universal tensile tester designed for fibers or small specimens records force elongation, force time, hysteresis, stress relaxation, multiple breaks, and rupture qualities. It is available from G. F. Bush Associates, Box 175, Princeton, N. J. The tester is especially useful in tests where the resultant graph's horizontal axis can represent either time or elongation.

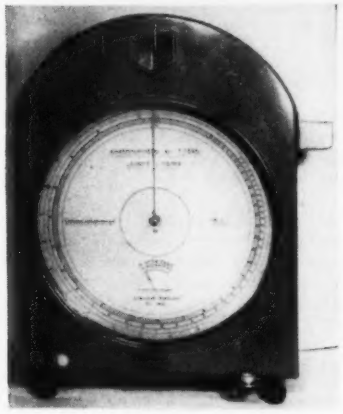
Load ranges are 0 to 100, 0 to 500, and 0 to 1,000 grs. and are independent of the chart drive. Elongation rates are ¼ to ½ in. per min. The power comes from a 60-cycle plug-in. Over-all dimensions of the tester are 30x18x12 ins.

(N-253)

Three Measuring Counters

Three measuring counters—a batching counter with alternate adding and subtracting counters, a three-counter unit with one unit that gives the grand total and two units that can be switched while a machine is in motion, and a twin-wheel counter that has a counterbalanced mounting for easy lifting—are available from Trumeter Co., 1265 Broadway, New York 1, N. Y.

(N-254)



Yarn Numbers Read Directly From One-Meter Lengths

A completely mechanical weighing instrument for the direct reading of yarn numbers from one-meter lengths or shorter has been developed by A. Andriesse, Padangstraat 34, Enchede, The Netherlands. Scale faces and gradations are available to meet the requirements of different types of mills and yarn-numbering systems.

Highly sensitive, the instrument can nevertheless be safely carried around because the weighing mechanism has no delicate knife edges.

(N-255)

Magnetic Amplifiers Regulate Without Maintenance

Commercial development of magnetic amplifiers for use on slashers has been announced by Westinghouse Electric Corp., P.O. Box 868, Pittsburgh, Pa. The simple device is a regulating-system component that has no tubes or moving parts to maintain but consists instead of selenium-rectifier stacks and wire-wound reactors.

(N-256)

Indicators Show Napping Energy

A new method of indicating energy on both Gessner double- and single-acting nappers has been developed and announced by David Gessner Co., 41 Fremont St., Worcester, Mass. Energy, or the amount of nap raised, has long been a difficult force to indicate and tabulate. By the same token, the accuracy by which this factor can be computed becomes important to the efficient operation of a napper.

The new energy indicators give a continuous indication of energy as the napper is being operated. Any change in the energy force is instantly observed. This energy can be tabulated for future reference, which makes it possible to duplicate napped finishes.

(N-257)

Meter Checks Card Grinding

A portable electric measuring device that makes it possible to evaluate the results of a card-grinding job in the mill has been developed by Toyoda Automatic Loom Works Ltd., Kariya near Nagoya, Japan. The evaluating device reproduces the grinding sound on a meter, and any fluctuations in the sound indicate whether and where grinding has been insufficient or badly done on any of the carding components.

The grinding sound generated at the grinding parts of the grinder and the clothing is received by a microphone and is changed into electrical vibrations, which are in turn amplified.

(N-258)

Pocket Microscope

An inspection instrument called the Optometer, a 50-power pocket measuring microscope, has been recently introduced by National Instrument Co., 5005 Queensbury Ave., Baltimore 15, Md. An engraved scale mounted in the body tube reads directly to 0.002 in. Estimations can easily be made to 0.0005 in. if needed.

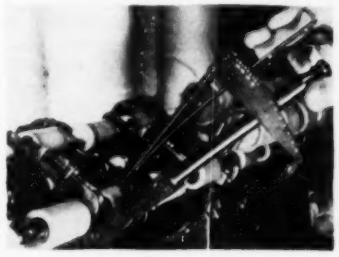
(N-259)

Fabric Yarn-Shift Tester

A fabric shift tester and a standard test method for use in determining the extent of yarn shift in a fabric has been developed by United States Testing Co., Park Ave., Hoboken, N. J. The testing unit and procedure are designed to aid mills in ascertaining the amount of instability there is in interlaced yarns in certain fine-fabric construction, particularly when they are woven in low counts and with filament yarns.

The tester is operated by making a one-half revolution of the crank to bring the rack to a full rear throw and then by lifting the arm and returning the rack to a full forward throw by another half-revolution of the crank.

(N-260)



Top-Roll Tester Checks Weight Distribution

The Sureweight, distributed and sold by Product Sales, Inc., Whitman, Mass., and Spartanburg, S. C., is a device that quickly and accurately measures the pressure of the saddle on each top roll of any drafting system. With it, mill men can quickly spot-check their top-roll weight distribution, reset their weight distribution in accordance with any new roll settings, determine optimum roll weighting, and check springweighted drafting systems.

(N-261)

Curve Assembly Makes pH Meters Into Titrators

A titration curve assembly that uses a pH meter to assist chemists in setting up controls on any variety of samples has been made available by Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa. The shape of the various curves, plus the indicated end points, supply all the data needed.

(N-262)

Air-Pressure Controller

Air pressures from 3 to 15 psi. for use in instrumentation are automatically controlled by the Conoflow device that has been developed by Reeves Pulley Co., Inc., 1225 Seventh St., Columbus, Ind. The new control is available for all the company's integral-horsepower, variable-speed drives.

The device permits the control of liquid levels in tanks, either open or closed, as well as the control of flow of liquid, gas, and chemicals, and pressure and temperature.

The new cylinder control is prelubricated; no outside lubrication is necessary. It can be operated from a mill's present air supply.

(N-263)

Measuring Device Reads Yardage

A new Trumeter has been developed by Trumeter Co., 1265 Broadway, New York, N. Y., for measuring piece lengths on continuous ranges in dyehouses and finishing plants. The measuring device

has an internal clutch that brings one counter into operation while the other counter is standing still. Each piece is measured separately by switching over from one counter to the other when the stitched seam is going through.

The reading for the piece that has gone through can be read off while the other counter is already measuring the next piece, and so on.

(N-264)

Tester Verifies Accuracy Of Pressure Gauges

A test gauge for pressure instruments is available from The Foxboro Co., Foxboro, Mass. An inexpensive gauge, it not only serves in checking pressure controllers, recorders, and indicators but also furnishes a standard of accuracy for calibrating other pressure-testing equipment in the instrument department.

A stainless-steel micrometer-adjusted pointer facilitates precision measurements on an easy-to-read dial. A durable leather carrying case with shoulder strap is optional.

Accuracy is within ½ of 1% of the total scale at any point in its range.

(N-265)

Courses-per-Inch Tester

The Cobert course counter, which eliminates yarn-size, temperature, and humidity variables, has been developed by Albico Precision Mfg. Co. Ltd., Barby, Warwickshire, England, for use on knitted fabrics of various types.

With the fabric stretched and held taut under uniform tension between rubber clamps, the indicator is placed over it and the number of courses per inch is quickly determined.

(N-266)

Yarn-Quality Control Aided by Electronic Instruments

Two electronic yarn-control and yarn-testing instruments have been developed in Britain: one for the simultaneous detecting and cutting of slubs in yarn being wound and the other for recording the variations in diameters of yarns as they are spun on spinning frames. Dawe Instruments Ltd., 130 Uxbridge Rd., London W7, England, is the manufacturer.

The first is the Linra photo slubber, originally devised to be attached to winders. The second is called the Linra photoelectric yarn-irregularity gauge, designed as a mobile unit for spinning-frame use. Both can be used on yarns of any fiber.

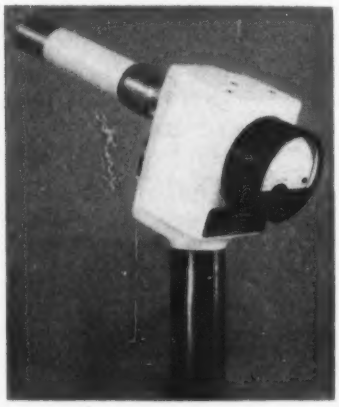
(N-267)

Yarn-Evenness Recorder And Integrator Is Versatile

A new yarn and sliver uniformity tester for sliver, roving, and yarn is now available from Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.

The instrument indicates the mean deviation of the yarn expressed as a percentage of the weight and the mean level of the yarn.

(N-268)



Electrostatic Charges Measured

The Statigun, a new instrument that safely measures electrostatic charges generated in manufacturing on a dial calibrated from 0 to 2,000 v. per ft., is available from Herman H. Sticht Co., Inc., 27 Park Place, New York, N. Y. The adjustable sleeve also makes possible readings of 1, 10, and 100 times the scale reading.

Measurement is of voltage gradient, or volts per foot.

(N-269)

Detergency Tester

A detergency tester that tests 4-in. pieces of test fabric has been made commercially available by American Conditioning House, Inc., 11 Melcher St., Boston 10, Mass. Called the Deter-Meter, the tester was originally developed for the Quartermaster Corps and has proved as dependable as the random-action type of laboratory wash test.

The instrument is capable of a wide range of mechanical actions, and it can duplicate the mechanical action of almost any laboratory or commercial washer.

(N-270)

Liquid-Level Controller

A new instrument that combines the measurement and control of flow and liquid levels has been developed by the industrial division of Minneapolis-Honeywell Regulator Co., Brown Instruments Div., Wayne and Windrim Aves., Philadelphia 44, Pa.

The new receiver, an Electronik reluctance-bridge receiver, not only indicates, interprets, and controls flow and liquid level, but data can also be retransmitted pneumatically to a second receiver, remotely located. An Indexet mechanism is available to reset the control index from a remotely located transmitter.

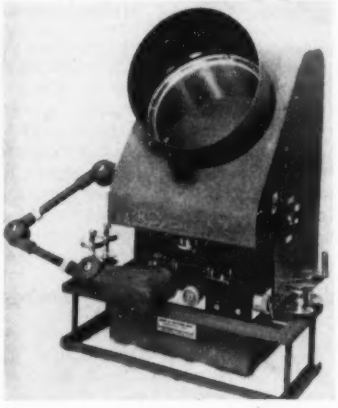
(N-271)

Densitrol Instrument Controls Density in Liquids

The Princo Densitrol, a density-sensitive instrument that can directly control density in such liquid-processing operations as blending, mixing, proportioning, diluting, or concentrating, has been developed by Precision Thermometer & Instrument Co., Brandywine St., Philadelphia 30, Pa.

Any calibration can be furnished. Automatic compensation for change of temperature in the sampled liquor is provided for. Models are available for operating temperatures up to 350° C. and operating pressures up to 600 psi.

(N-272)

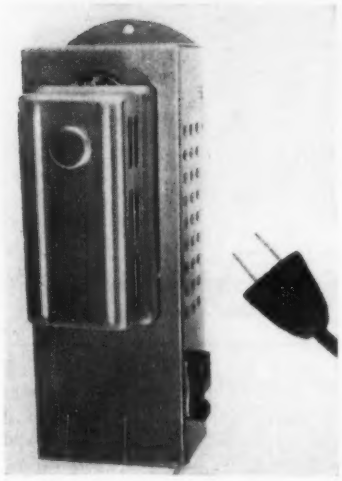


Fiber, Yarn, and Fabric Viewer

A new optical instrument for counting the number of ends and picks per inch, and for measuring and observing fibers, yarns, and fabrics is available from Sjostrom Machine Co., Lawrence, Mass. The viewer, manufactured in Switzerland, is called the Projectina.

Finely spaced lines on the ground-glass screen permit the measurement of fibers or yarns in either fractions of an inch or in millimeters.

(N-273)

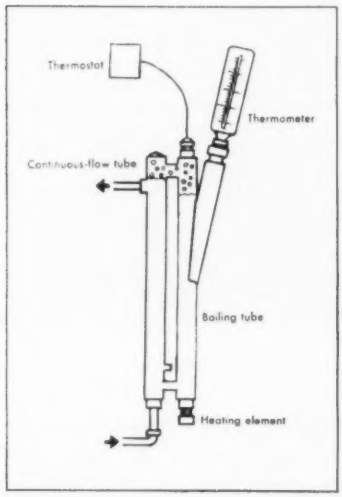


Humidity Controller

A simple automatic plug-in humidistat designed to control electrically powered humidifiers and dehumidifiers has been put on the market by Abbeon Supply Co., 179-15 Jamaica Ave., Jamaica 32, N. Y. It is priced at $35.

The control is powerful enough to handle almost all modern types of electric humidifiers and dehumidifiers.

(N-274)

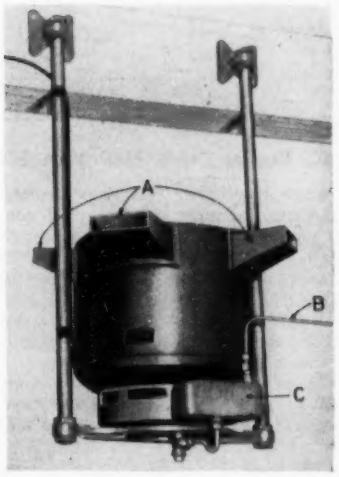


Moisture-Measuring Instrument

No moisture-sensitive element is necessary to determine relative humidity with a new instrument announced by Niagara Blower Co., 405 Lexington Ave., New York 17, N. Y. The air is dehumidified directly by a liquid absorbent in the air-conditioning unit. The amount of moisture to be permitted in the conditioned air is governed by the absorbent-liquid concentration.

The higher the boiling point (concentration), the more moisture is pulled out of the air by the liquid absorbent.

(N-275)



Humidifying Unit

A self-contained humidifier, Model 31A-4, can be used in single- or multiple-unit installations in mills. Motor driven, it features a four-way distribution of vapor and a dial-type humidistat for controlling relative humidity.

Manufacturer is Standard Engineering Works, Inc., Pawtucket, R. I.

(N-276)

Work-Area Heater

A new 168,000-Btu. unit with an adjustable vent for permanent installation or portable on-the-job use has been announced by Fageol Heat Machine Co., 5725 Mt. Elliot Ave., Detroit, Mich. Known as Model VO-168, the new machine operates on a counterflow principle of spraying heated air out across floor areas to form a 6-ft.-high blanket of warmth in a work zone. The machines are designed to heat men at work, not empty spaces.

(N-277)

Humidifying Unit Is Self-Contained

A Type E humidifier has been brought out by The Bahnson Co., 1024 S. Marshall St., Winston-Salem, N. C., that provides automatically controlled humidification. Units can be used for complete humidification systems, for spot humidification in large spaces, for boosting the capacity of existing systems, and for precise humidity control in laboratories or pilot units.

The self-contained units are installed by suspending them from the ceiling. They are then connected with a water supply and an electrical outlet.

Water at normal temperatures and up to 80-psi. pressure is atomized by centrifugal force and is distributed horizontally through a 360° opening. Any portion of the discharge opening can be blocked off for directional distribution.

(N-278)

Heat Controller Anticipates Temperature Variations

A new indicating controller featuring anticipating action has been added to its Capacitrol line by Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill. The new process-heat control gives unvarying straight-line control by means of a resistor network and relay circuit that anticipates the approach and departure of temperatures caused by various heat-transfer lags and load requirements.

(N-279)

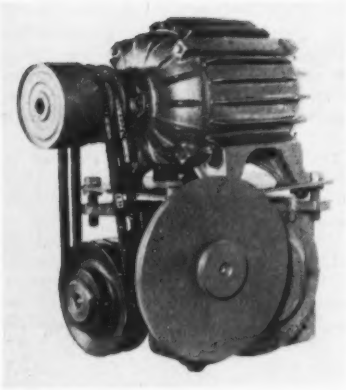
Fan for Spinning Frames

A simple, low-cost oscillating fan developed in France for the cleaning of ring spinning frames is now available from Etablissements Neu S. A., 47 Rue Fourier, Lille (Nord), France.

One unit can keep roving, lappets, rolls, and yarn clean on half of one side of two ordinary-length frames without disturbing the spinning operation.

The fans are priced to land in the United States ready for use at about $225.

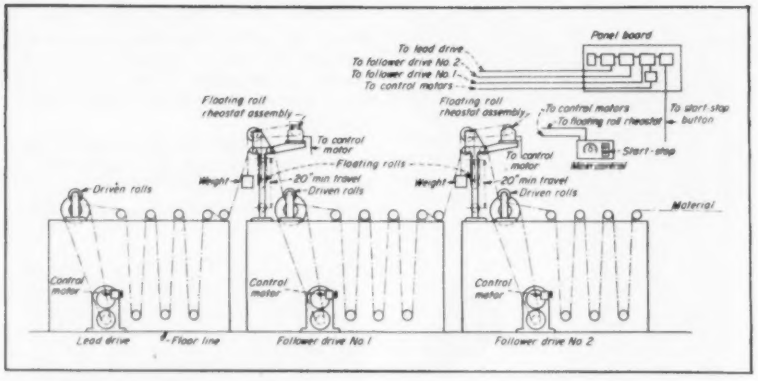
(N-280)



New Card Drive Saves Space

A new package drive for cards has been developed by Allis-Chalmers Mfg. Co., 1126 S. 70th St., Milwaukee 1, Wis. The new unit consists of a 1½-hp. 1,740-rpm. standard enclosed motor, Falk gear reducer, automatic friction clutch, and Texrope drives. The right-angle, single-reduction gear permits mounting the motor at a right angle to the card shaft, and the unit extends only a few inches into the aisle adjacent to the card. The drive mounts directly on the card-cylinder shaft with a torque arm mounted on the card base or suitable anchoring point.

(N-281)



A.C. Range Drive Has Variable-Speed Control

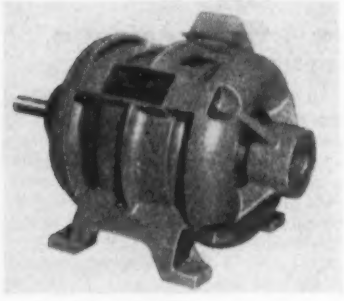
A new range drive that gives accurate, immediate, infinitely variable speed control plus automatic inner-drive synchronization of all ranges without the problem of converting current has been put on the market by Reeves Pulley Co., Inc., 1225 Seventh St., Columbus, Ind. No generators are needed with the drive as is the case with d.c. drives.

The new range drive is the constant-torque type and does not need oversize capacity for reduced speeds. It is a mechanical drive.

In the drive, the operating or material speed is set through the lead drive, and the whole system is controlled from one control panel. Each follower drive can be adjusted at any time by its own individual manual controls.

Once the range is operated, automatic controls take over. As speed variations occur because of stretch, shrinkage, or load changes between units, the individual units automatically compensate for the changes and bring all units back into synchronization.

(N-283)



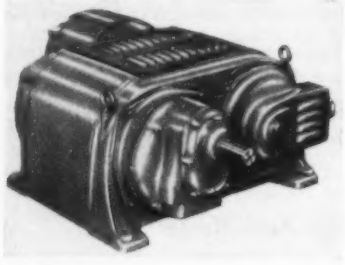
Slow-Accelerating Roving-Frame Motor

Development of a slow-accelerating motor (Type APQR) for slubbers, intermediates, speeders, jack frames, and other types of roving frames has been announced by Allis-Chalmers Mfg. Co., 1126 S. 70th St., Milwaukee, Wis. The new motor is built to provide even tension on the roving during starting-up periods.

Bearings of the motor are lubricated and sealed at the factory.

The new motor is available in 3-hp. 1,200-rpm., 5-hp. 1,200-rpm., and 5-hp. 900-rpm ratings.

(N-282)



Horizontal Varidrive

Varidrive motors up to 30 hp. have been developed by U. S. Electrical Motors, Inc., Box 2058, Los Angeles, Calif. The new frame makes for a more compact motor installation in applications demanding horizontal assemblies.

The drives are also available in combination with the company's synchronized gearing system and with either single- or double-reduction gearing.

Remote controls are available either with mechanical extensions or electric push-button stations. Ratings from ¼ to 50 hp. are offered, with speed variations up to 10:1. Speeds range from 2 to 10,000 rpm.

(N-284)

Taper-Lock Bushings

A line of roller-chain sprocket wheels with taper-lock bushings that speed up roller-chain assembly has been brought out by Link-Belt Co., 307 N. Michigan Ave., Chicago 1, Ill. Without reboring, stock sizes of sprocket wheels can be securely mounted on a shaft by means of the tapered bushing, and a tight fit within the full range of normal shafting tolerances is assured.

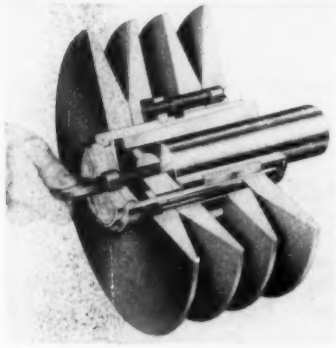
Setscrews force and hold the split tapered bushing in the tapered bore of the sprocket wheel and cause it to lock tightly onto the shaft. The full length of the bushing supports the sprocket on the shaft.

(N-285)

Chain-Drive Overload Device

An overload protector that keeps chain drives of all types from overloading has been brought out by Lamson Corp., 900 Lamson St., Syracuse 1, N. Y. The device consists of an eccentrically located idler sprocket counterbalanced by a weight-loaded arm. The counterbalance is adjustable so that the device will operate at any chain tension up to 1,000 lbs.

(N-286)



New Drive Facilitates Speed Changes

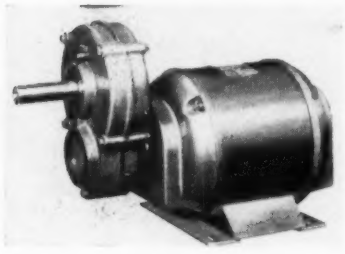
A new spinning-frame drive incorporating the Dodge Taper-Lock principle is available from Dodge Mfg. Corp., South William St., Mishawaka, Ind.

Components of the new variable-speed drive are: (1) a variable-pitch motor sheave; (2) a set of wide-range belts; (3) a companion sheave; and (4) a slide motor base.

The variable-sheave assembly locks on the motor shaft as a unit with the turn of a screw. Pitch diameter is changed easily by adjusting a screw located at either end of the sheave. The precision-grooved companion sheave in the drive is held firmly to the shaft by the Taper-Lock bushing.

The slide motor base permits changes in center distances to preserve proper belt tension as the variable pitch sheave is adjusted for different speeds. A full range of centers is provided with a turn of one screw.

(N-287)



Speed Reducer

A new speed reducer, the Model 3R3 Uni-Reducer, has been developed by Turner Uni-Drive Co., 3400 Terrace St., Kansas City, Mo. The reducer converts electric motors to geared-motor reducers by slipping onto the motor shaft directly. The usual coupling from the motor shaft to the reducer is eliminated.

The reducer is designed to fit standard motors from 1 to 5 hp., 1,800 rpm.; and from 1 to 3 hp., 1,200 rpm.

(N-288)

Automatic Control for Variable-Speed Equipment

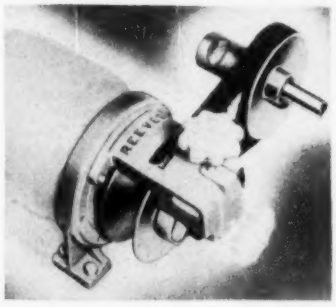
A tubeless electrical system for the automatic control and regulation of variable-speed machinery has been introduced by Bogue Electric Mfg. Co., 52 Iowa Ave., Paterson, N. J. Known as Tran Tork, the control equipment has no electronic devices or vacuum tubes to maintain.

The system has no tubes and no moving or wearing parts to warm up.

The heart of the variable-speed equipment is a specially developed magnetic amplifier, or two or three of them if needed.

The Tran Tork control is available for motors of all sizes from fractional to 20-hp. units and can automatically maintain constant tension, constant torque, or constant speed. Similarly, it can provide continuously variable adjustment of tension, torque, or speed.

(N-289)



Variable-Speed Unit

The Flexi-Speed drive, a new variable-speed unit that combines great flexibility in operation and application with low unit cost, has been introduced by Reeves Pulley Co., 1225 Seventh St., Columbus, Ind.

The drives can be mounted in almost any position around the driven equipment, can drive in any direction, and can deliver any desired speed within a ratio of 8 to 1.

(N-290)

Overhead V-Belt Drive Eases Starting Up of Cards

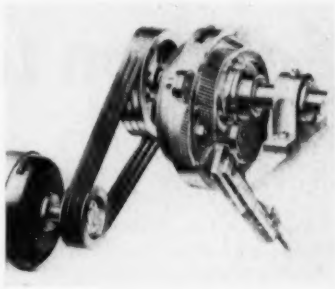
A new type of card drive has been announced by Browning Belting & Supply Co. The drive includes a hydro-sheave drive manufactured by Twin Disc Clutch Co., 1328 Racine St., Racine, Wis.

A 1½-hp., 1,200-rpm. ball-bearing motor is mounted on a bracket installed on top of the card. The motor shaft is extended over the cylinder pulleys through the Hydro-Sheave and fitted with matched V-belts to drive the card cylinder.

When the speed of the motor approaches 600 rpm., the twin-disc sheave begins to operate, and the card cylinder starts to revolve slowly and increases in speed until the cylinder reaches the full operating speed of 165 rpm. This procedure requires less than a minute and allows time for the cylinder to be stripped as it is revolving slowly.

The cylinder and doffer are both stripped from the high-speed single-groove V-belt sheave located on the outside of the twin-disc hydraulic card drive.

(N-291)



Speed-Reduction Units Are Easily Shaft Mounted

Shaft-King, a new series of 20:1 ratio speed-reduction units for shaft mounting, has been developed by American Pulley Co., 4200 Wissahickon Ave., Philadelphia 29, Pa.

The speed reducers consist of two trains of the single-helical type. Ball bearings and tapered roller bearings are used frequently in the construction.

Split tapered bushings with lock nuts fit shafts up to 3⅞ ins. The reducers are available also with torque-arm overload release.

(N-292)

Chain-Drive Bushings

No accurate grinding of shafts is necessary with the chain-drive sprockets and bushings that have been put on the market for use with roller chain by Dodge Mfg. Co., Mishawaka, Ind. The new sprockets and bushings work together on shafting by means of the Taper-Lock principle; the split and tapered bushing expands and locks the sprocket to the shaft or contacts and locks the two together, as required.

(N-293)

Variable-Speed Drive in Enclosed Fan-Cooled Model

Variable-speed electric power drives called Speed-Trols, in the range of 20 to 25 hp. with 2-to-1, 3-to-1, and 4-to-1 speed variation, are now available in totally enclosed fan-cooled models from Sterling Electric Motors, Inc., 5401 Anaheim-Telegraph Rd., Los Angeles 22, Calif. A dual cooling system provides highly efficient internal and external cooling.

(N-294)

(Continued on page 250)

Papers and Products Seek Real Solution to SYNTHETICS Question

▶ **Synthetic fibers—their problems in dyeing and finishing, blending, and static control—dominated the show.**

▶ **Wool and cotton—chemical treatments to improve the natural fibers, dyeing, scouring, mercerizing, and optical bleaching—shared the spotlight with several good papers.**

☆

The 1953 convention of the American Association of Textile Chemists and Colorists in Chicago, Ill., Sept. 17-19, was highlighted by a good series of papers.

Besides emphasis placed on the new fibers and fabrics and methods of dyeing and finishing, detergents, antistatic agents, and procedures for leveling dyes received attention.

Exhibitors, with few exceptions, showed product samples and fabrics dyed or finished with their products.

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TO REQUEST FURTHER INFORMATION on any item described, please use the Reader-Service card on p. 187. Refer to the number following each description.

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New Pilling Attachment Fits Abrasion Tester

A pilling tester that fits on its abrasion tester with no permanent modifications was shown by U. S. Testing Co., Inc., 1415 Park Ave., Hoboken, N. J. The unit, being inspected above by TW's Jim Kennedy, combines a rotary action with mild abrasion to make pills.

The lower reciprocating table of the abrasion tester is first fitted with a rotary table that is offset. The upper table is replaced with an arm that has a small disk whose flat surface rests on the rotary table. The disk and table are covered with pieces of the fabric, and the action gets under way.

As the lower unit reciprocates, the rotary table turns because the disk exerts a holding action. As the table turns, it causes the disk to turn as well. So on one leg of the cycle each surface has a circular motion. On the other leg of the reciprocating motion, there is no rotary motion (each wheel can rotate in only one direction); so pure abrasion takes place.

Tests are said to correlate closely with wear results. (A-1)

Hilton-Davis Shows Brightener, Paste Dyes, Pigments

Three new products were announced at the convention by Hilton-Davis Chemical Co., 2235 Langdon Farm Rd., Cincinnati 13, Ohio.

A new optical brightener (Hiltamine Artic White N) is for nylon, Orlon, acetate, and wool.

A complete range of acetate dyes in paste form are called Safaritones.

Flushed pigments for printing are available in pulp form (Hiltasperse) and in solvent form (Solvesperse). (A-2)

Water-Soluble Antistatic Agents

A new line of water-soluble antistatic agents was presented by Victor Chemical Works, 141 W. Jackson Blvd., Chicago 4, Ill. The nonpermanent agents are for use for raw stock or yarns and are available in five types from a mobile liquid through to a solid. Preliminary laboratory results on Orlon, Dacron, and acetate show marked results in lowered voltages. (A-3)

Vicara Blends Show Similarity to Wool

Garments made from 50% nylon and 50% Vicara were shown by Virginia-Carolina Chemical Corp., 500 Fifth Ave., New York, N. Y. These garments showed many properties of wool but retained the convenience of the synthetic garments. The fabric was absorbent, with a warm, soft handle similar to cashmere. Little pilling trouble has been experienced in these garments, and the fabric looks new after many washings. Static problems are reduced. The itchiness of wool is not apparent, and no shrinkage or felting is experienced. Color blends can be made by dyeing the vicara and leaving the nlyon white. (A-4)

Dry-Can Size Adhesions Prevented With Coating

A dry can that had been coated with Teflon was shown by General Plastics Corp., Clifton, N. J. Dry cans, slasher cylinders, vats, troughs, and other textile equipment treated with Teflon resist sticking of size and other unwanted accumulations. One primer coat and two clear coats are used to produce a 0.0015- to 0.002-in. coating, which is then baked on at 700° F. New equipment can be coated with Teflon directly, but used equipment is shot-blasted to remove dirt and then coated. Finishers are reported to make longer runs without cleaning cylinders. Heat transfer from dry cans is improved by the Teflon treatment. Teflon-coated tenter-frame pin plates were demonstrated. Teflon is a Du Pont polytetrafluoroethylene material. (A-5)

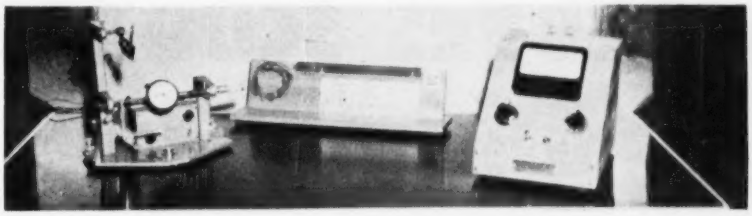
Uniformity-Tester Attachment Promises Quicker Results

The Automatic Evaluator, a device aimed at better interpretation of uniformity, was shown for the first time by Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio. The unit features measurement of peak readings at 10-ft. lengths of yarn (less for bulkier continuous strands).

The evaluator, offered as a $200 attachment for existing Uniformity Analyzers, has two dials and two lights. One dial shows percent nonuniformity, and the other indicates the fiducial mean (to correct for long-range differences in the average). Each light flashes every 10 secs., but timing is offset so that one reading is taken every 5 secs.

In less than 4 mins., an operator can test 1,000 ft. of yarn and calculate the result. Twenty readings of each dial are taken, and then the average percent nonuniformity is divided by the average fiducial mean.

Readings so taken are said to correlate very well with chart calculations. Defects averaged out in area (integrating) devices are said to be shown in true perspective by the new unit. (A-6)



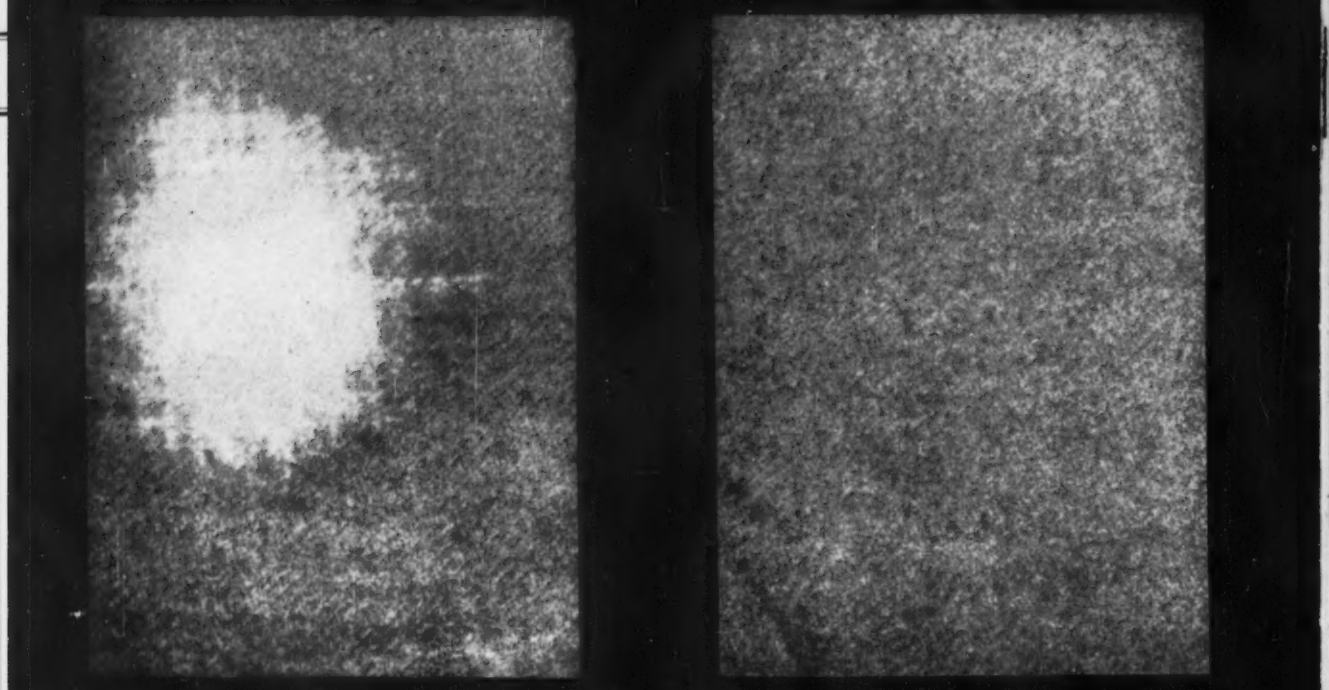
Static, Conductivity, Thickness Measured by New Instruments

Three new instruments were shown by Custom Scientific Instruments, Inc., Box 170, Arlington, N. J.

An electrical resistance tester (right) measures from $1x10^8$ to $400,000x10^8$ ohms and is used to measure static properties of fabrics as determined by surface electrical resistance. Cost is $250.

A low-pressure thickness gauge (left) suspends the fabric vertically and is said to have high reproducibility. The instrument can be operated at pressures from 0.01 to 1.5 psi. The fabric itself determines the end point of the test because both the presser foot and anvil are free to move during the test. Price is $295.

A probe for measuring thermal conductivity of fabrics (center) has a heating coil and a thermocouple inside a 0.020-in. wire 8½ ins. long. The probe is laid between layers of fabric, and the power supplied as heat is transmitted as a measure of conductivity (A-7)



ORDINARY MACHINE OIL. Ultraviolet light proves that ordinary machine oil is hard to scour. Oil that remains in the textile prevents level dyeing.

SUNOTEX MACHINE OIL. Ultraviolet light proves scourability of Sunotex. This oil scours easily and completely, leaves no stain, permits level dyeing.

ULTRAVIOLET LIGHT PROVES SCOURABILITY OF SUNOTEX MACHINE OIL

These swatches were oil spotted: one with ordinary machine oil, the other with Sunotex. After scouring, they both *looked* clean. To make sure, both swatches were photographed under ultraviolet light. The swatch spotted with ordinary machine oil fluoresced brightly, showing that even though it looked clean, it was still badly spotted. The swatch spotted with Sunotex didn't fluoresce, proving it to be oil-free after scouring.

Here's proof of how Sunotex helps prevent spoiled goods and unlevel dyeing. It scours easily, leaves no stain, does not damage fabrics.

For more information, call your nearest Sun office or write SUN OIL COMPANY, Phila. 3, Pa., Dept. TW-11.

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Dope-Dyed Dynel Used In Knitted Pile Fabrics

Borg fabrics made from dope-dyed Dynel yarn were shown by Carbide and Carbon Chemicals Co., 30 E. 42nd St., New York, N. Y. These knitted fabrics contained 80% dope-dyed Dynel. The backing was cotton, and the fabric was made in 36-in. widths. Socks of a cotton and Dynel 50-50 blend were piece dyed with direct dyestuffs on the cotton and acetate dyestuffs on the Dynel. (A-10)

Latex Used As Warp Size For Cotton Yarns

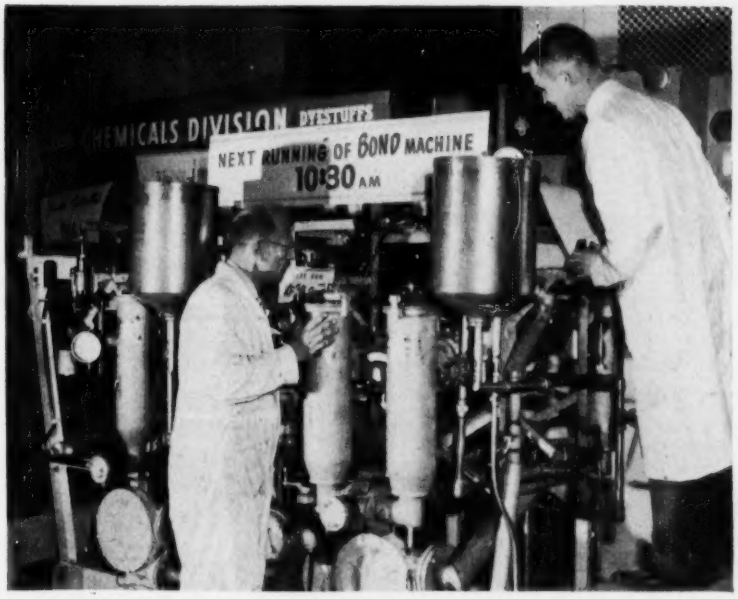
Denim fabrics and garments treated with Hycar latex were shown by B. F. Goodrich Chemical Co., Cleveland, Ohio. The solution is prepared and applied at room temperature on conventional slashing equipment. The size remains in the yarn through extensive launderings and gives longer wear life to garments. Finished denim retains a soft, full hand through many washings. Blue denim with latex-sized warp yarns show little fading, and bleeding of color to filling yarns is prevented as the latex sets the color. Fabrics from Hycar-treated yarns do not interfere with mercerizing. Hycar latex is a butadiene-acrylonitrile copolymer, soluble in water and requiring no special changes in the equipment used for most cotton slashing. (A-11)

New Dye Reagent Replaces Anhydrous Sodium Sulfate

TNA-S, a white granular anhydrous crystal, was shown by International Salt Co., Scranton, Pa. TNA-S reacts like sodium sulfate in a neutral dyebath. It is readily soluble in cold or hot water and is supplied in the dry, fine granular form or can be converted to a fully saturated brine with a dissolver. Excellent crockfastness is produced with napthol dyes and TNA-S. Effective results are noticed on direct dyes. Dye precipitation is eliminated, shades are level, and a soft, smooth finish is obtained in dyeing cotton, rayon, wool or blends in yarn, piece, or staple form. (A-12)

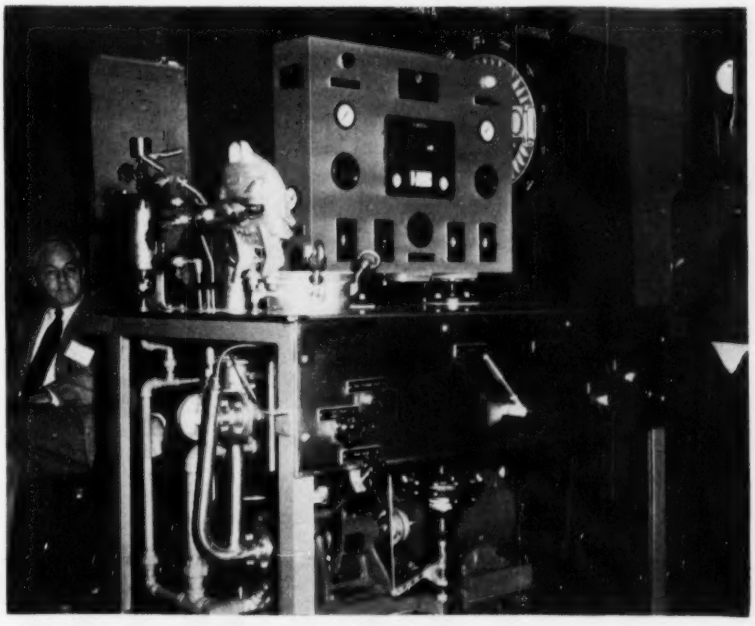
Fungicides Change Fabric Properties

Samples of fungicides and the effect of mold and bacteria on treated and non-treated goods were shown by Scientific Oil Compounding Co., Inc., 1637-55 Kilburn Ave., Chicago 23, Ill. These mildewproofing agents are applied to textiles after dyeing. The solutions are generally padded on, but piece-dyeing and package-dyeing machinery has also been used to apply the solution. The solutions are easily mixed with water or Stoddard solvent that can be reused. Several different solutions for spe-



Bond Machine Made Demonstration Runs

Boyce C. Bond (left) and Richard F. Jenkins prepare for a run of the Bond machine. Beside the demonstration of the machine, the Pittsburgh Coke & Chemical Co. showed its new line of vat dyestuffs for the first time. (A-8)



High-Temp Lab Machine Has New Features

A high-temperature laboratory package-dyeing machine was shown by Gaston County Dyeing Machine Co., Stanley, N. C. The machine has a cooling jacket, a sampling device, a dye-add chamber, and other features necessary to efficient high-pressure operation. (A-9)

Don't Sacrifice Mercerizing Speed To Gain Uniform Tension!

Butterworth Mercerizing Tenter, with overhead drive, for high-speed, uniform tension.

Butterworth Mercerizing Tenters provide speeds up to 100 yards per minute, with a maximum width of cloth maintained throughout the run.

Width control and precision indicators for speed give uniform tension on the goods. Help to eliminate one of the causes of cloudy dyeing.

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cific end uses were shown. In addition to providing a long wear life for textiles used outdoors, applications were shown in hosiery and other wearing apparel for sanitation purposes. (A-13)

Sewing-Thread Breakage Reduced by Lubricant

Special lubricants for synthetic-fiber sewing threads were shown by Glyco Products Co., Inc., 26 Court St., Brooklyn 1, N. Y. Polyethylene glycol is applied to the yarn by a saturated sponge placed between the needle and the take-up bar. Thread breakage is said to be eliminated, and static charges are not picked up. (A-14)

Water-Repellent Finishes Are Easy To Apply

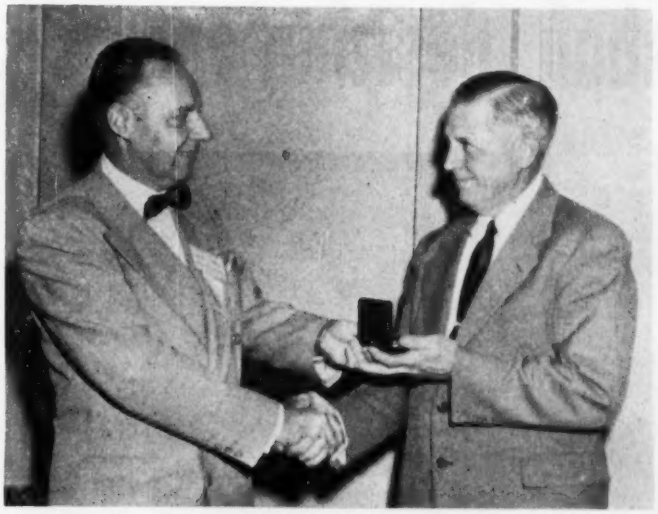
Three different emulsions for finishing various textile materials were shown by Dow Corning Corp., Midland, Mich. These emulsions, in addition to their water-repellent properties, give improved spot resistance, increased wear life, a permanent finish, and improved sewability by lubricating the needles and relieving needle heat. Fabrics can be treated on any conventional padding equipment and can be cured in a loop dryer or tenter frame. These emulsions can be used as a water repellent on acetate, nylon, Acrilan, Orlon, Dacron, and blends containing a substantial percentage of these fibers. (A-15)

New Colors Have Good Fastness

A larger variety of Irgalans for wool, silk, and nylon were shown by Geigy Co., Inc., 89 Barclay St., New York 8, N. Y. These Irgalans included Yellow 2RL, Red 3G, Brown Violet DL, and Bordeaux 2BL. Fabrics dyed with Cuprophenyl Black RL show fastness to light and washing and leave acetate white after a copper sulfate treatment. G-67 is a fixation product for rayon and cotton goods that can be combined with a resin finish for fastness to washing, perspiration, and light. The dyed goods are run for 20 mins. in a low-percentage solution (about 2%) of G-67. (A-16)

Static Lubricant Has Balanced Performance

A static lubricant engineered to specific fibers was shown by Nopco Chemical Co., First & Essex Sts., Harrison, N. J. Static control with a balanced performance is the aim of this new lubricant. 1056 coning oil is an antistatic agent with detergency, lubricity, and wetting properties. Nopcostat is used for processing on the Pacific converter, and various types are used according to the fiber. 1056 antistatic agent has a built-in detergent for easy removal. (A-17)

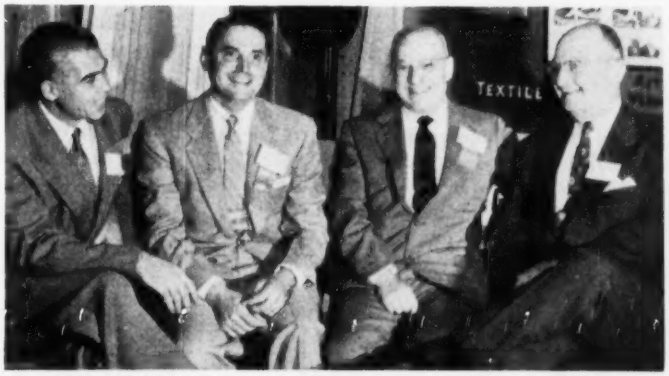


The 10th Olney Medal Winner

Roland E. Derby (right) of Tyngsborough, Mass., received the 10th Olney Medal from J. Robert Bonnar, president of AATCC. Mr. Derby has been a member of the association since 1921, when he was a student at Lowell Tech.

He is currently president of the LTI Research Foundation and a member of the LTI Building Foundation and has served three terms as a trustee of LTI.

In 1939 he developed and patented the Derby continuous dry cleaner now in use at many woolen mills and also developed and patented an apparatus and process for continually neutralizing dry acid cloth. Mr. Derby was the first to show in a practical way how carbonizing resist was produced and how to duplicate these results in the laboratory. He developed processes for practical application of soluble vats to piece goods for indigo shades for the Navy during World War II and also produced a chrome-piece-dyed duplication of indigo-dyed shades for the Navy.



THREE AATCC OFFICIALS gathered in TW's booth with J. J. McGuinness, advertising director of Dexter Chemical Corp. Left to right they are: Mr. McGuinness; Thomas J. Scanlon, secretary, Philadelphia section; Azel W. Mack, secretary, Northern New England section; and William B. Griffith, vice chairman, Southeastern section.

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Intersectional Contest Papers

• Judged by the committee on a basis of 30% each for originality, scientific value, and practicality, plus 10% for presentation, the three 1953 winners are summarized here.

• All other sectional papers, plus the two student papers, are summarized in this issue of TW. Other selected papers will be reviewed next month.

★ **First-Prize Winner**
Rhode Island Section AATCC

Four Helps in Reducing U-F Damage to Lightfastness

► Direct dyes treated with a urea-formaldehyde resin often lose in lightfastness. Here are four factors that can help reduce such damage.

Some of the reduction of lightfastness of direct dyes treated with urea-formaldehyde resins can be avoided if you: (1) carefully select the catalyst to be used, and (2) control the molar ratio of urea to formaldehyde.

Although the effect of urea-formaldehyde on lightfastness of direct dyes varies so widely that it is impossible to formulate any general rules, this study indicated that:

1. The number and position in the dye molecule of the reactive groups OH and NH_2 largely determine the effect of the resin on lightfastness.
2. Lightfastness of direct dyes with NH_2 groups attached to the naphthalene nucleus adjacent to the diazo groups is reduced by treatment with formaldehyde plus a catalyst.
3. Lightfastness is damaged by an increase in the molar ratio of formaldehyde to urea in the resin.
4. A nonammoniacal catalyst reduces lightfastness the least.

★ **Second-Prize Winner**
New York Section AATCC

Union Dyeing of Disperse-Dyed Fibers With Wool

► Wool staining is an unavoidable result of the use of disperse dyes in blend dyeing. By careful selection of dyes and control of dyebath conditions and procedures, the bad effects can be minimized.

Wool and acetate, wool and Dacron, wool and Dynel are examples of combinations that could be more important commercially except for the dyeing problem. The properties of wool can be extended and/or reinforced by blending with acetate, Dacron, or Dynel, all of which have specific properties of their own to recommend them. The advantageous physical properties of these blends have already been demonstrated in the production (by separate-fiber stock dyeing techniques) of wool and Dacron and wool and acetate suitings, wool and Dynel jersey, etc.

Acetate, Dacron, and Dynel are readily colored when dyed alone with dispersed or acetate dyes. This class of dyes permits a wide range of shades on acetate, Dacron, and Dynel; it is therefore inevitable that dispersed dyes be used on these fibers for most colors, whether the fibers are dyed alone or with some other fiber.

When wool is present in a bath containing dispersed dyes, however, it is stained by loosely adhering dye particles because of a superficial affinity that exists between wool and dispersed dyes. The stain usually has poor resistance to light, washing, and crocking. Thus, a given color may be formulated with soluble dyes that show excellent fastness on the wool and dispersed dyes that show excellent fastness on the synthetic fiber, but the final union-dyed shade will have poor fastness because the dispersed dye goes heavily onto the wool and that portion is fugitive.

This staining is the problem in dyeing

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- **Lug Straps, Harness Leathers, Heel and Jack Straps** all serve as dependable members of the Orange Line team . . . each the best for its job.
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T-6

wool with fibers that require dispersed dyes.

This paper analyzes the problems of combination dyeing of wool and acetate, wool and Dynel, and wool and Dacron, with particular reference to the problem of dispersed-dye staining on wool to determine means of minimizing the staining tendency, to help the practical dyer choose the best dye combinations and dyeing position, and finally to show the practical application of the techniques described.

Dye Type and Dyebath Conditions

In the absence of dispersing agents other than what is in the dyes themselves, there would appear to be relatively small differences among dyes as to inherent staining properties.

It seemed that chromation of dispersed dyes to increase their washfastness on wool might be promising, but the shade change of the dyes was so great, the dyes that showed this behavior so few, and their color range so limited that it was concluded to be an approach with no practical significance.

Some dispersed dyes are adversely affected by presence of acid in the dyebath. Most dispersed dyes are not thus affected and show no differences in staining tendency whether dyed in the presence of acid or neutral.

Neutral to strong-acid union-dyeing procedures may be used for such blends if Class B dyes are avoided. Chrome-dyeing procedures may be used for the wool portion of the blend if those few dispersed dyes that show radical shade changes are omitted.

The findings recommend nonionic dispersing agents for minimum staining.

Dyeing Time and Temperature

The extent of wool staining is related to the amount of acetate dye in the dyebath at any given time. At the beginning of dyeing the dispersed dye concentration is greatest, which effect causes the initial heavy staining. As dyeing proceeds, part of the dye is absorbed on the acetate, which leaves less available in the bath to stain the wool. Cautious and progressive addition of the acetate color is recommended.

Thorough scouring of blended yarn or piece goods before dyeing to remove as much residual spinning oil and grease as possible is conducive to reduction of wool staining by dispersed dyes.

The probable value of a clearing process after dyeing is illustrated in the reduction of wool stain by giving the goods a post-dyeing scour.

★ **Third-Prize Winner**

Philadelphia Section AATCC

How To Level Uneven Dyeings

▶ Tests were made on seven fibers. Sixteen typical dyeing assistants, representative of currently available products, were used. Results showed that in some cases leveling time and efficiency can be improved.

Acrilan, cotton, Dacron, Dynel, nylon, Orlon, and wool skeins were dyed with various commonly used dyes. Undyed skeins were used in migration tests involving different time, temperature, and reagent conditions.

Acrilan dyeings were quite hard to level, particularly the chrome colors. Acid dyes were less hard and premetallized colors easiest to level, a condition not expected from the theoretical similarity between the wool and Acrilan dyeing mechanisms.

Direct, developed, and aftertreated dyes on cotton were relatively easy to level, but migration tests showed no effective results on vats of any types.

Dacron was investigated for the first time in this study, as claimed by the authors. The peculiar mechanism of Dacron dyeing with carriers made the study involved. The conclusion arrived at was that no single class of assistants was more effective than any other.

Dynel dyed with disperse dyes was more easily leveled than that dyed with acid dyes. Use of a polyphosphate with ammonia speeded leveling.

Nylon and wool dyed with acid dyes leveled consistently well with cation-active agents and nonionics. Wool dyed with chrome dyes showed no tendency to level with any reagents. The wool study seemed to be more conclusive and more extensive than those studies of the other fibers.

Piedmont Section AATCC

How Resin Treatments Affect Acetate Dyes

▶ Tear-strength tests could be used for quality-control work.

▶ Presently used tests are not the most suitable.

Chemical treatments of fabrics consist of simple coatings such as starching, rubberizing, or flameproofing that affect the exterior of the fiber and treatments such as resin impregnation for crush resistance, and acetylating that produces changes within the fiber. The tear strength is also affected by the fiber used and the fabric geometry.

As the tear strength of textiles is indicative of performance and sensitive to changes in the fabric, a tear-strength test should be used for quality-control work.

A tear test as an index of fabric quality was the object of the research project. This objective could be achieved best by determining the most suitable type of tear test, presenting data that can give a background of information to focus attention on the fact that tear strength is an important aspect of fabric quality.

Efforts were concentrated on textiles treated with resins for crush resistance because there is widespread interest in this field and the tear strength is critical in such fabrics. If a reliable test were available for tear strength, the producers of resin-treated textiles could produce a better and more uniform material.

Three typical fabrics varying in weave, weight, and material were used in the test. Fabric A is a plain-weave cotton, Fabric B is a plain-weave rayon, and Fabric C is a gabardine-weave rayon.

The resin used for treating the fabrics was a commercial urea-formaldehyde cream.

The softener used was a cationic type, alkyl-imidazoline-hydro acetate.

How the Fabrics Were Treated

After desizing, the fabrics were treated with various concentrations of resin and softener by padding on the solution. They were then dried in an enclosed tenter

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Pittsburgh-Vat Olive TR Paste is a highly dispersed pigment in free flowing paste form—ideal for both pigment and reduced application. It can be used for dyeing in all types of conventional machinery. Vat Olive TR is especially suitable for dyeing cotton, viscose rayon and linen in their various forms. And like all *Pittsburgh* Vat Dyes, Vat Olive TR Paste is quality controlled from coal to color in a single basic and integrated plant. *How do you benefit?* In uniform, top quality dyeing results and work that consistently meets all military specifications. Samples and technical data are immediately available. Write, wire or phone today.

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PITTSBURGH-Vat Olive T
PITTSBURGH-Vat Olive TR
PITTSBURGH-Vat Khaki GG
PITTSBURGH-Vat Olive Green BD

For "OD" Shades

PITTSBURGH-Vat Olive T
PITTSBURGH-Vat Olive TR
PITTSBURGH-Vat Khaki GG
PITTSBURGH-Vat Olive Green BD
PITTSBURGH-Vat Brown G
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frame with the temperature at approximately 265° F. The goods were then cured for a period of 5 mins. at 300° F. Following the cure, the goods were washed lightly with ammonia and a synthetic detergent. After washing, the goods were dried and framed to width.

The goals for the resin and softener add-on (nominal resin content) were: (a) no treatment, (b) 4% resin, (c) 8% resin, (d) 8% resin plus 1% softener, (e) 16% resin, and (f) 16% resin plus 1% softener.

The goods were aged together for two weeks and various samples sent to participating laboratories where the samples were conditioned for a minimum of 72 hrs. at 70° F. and 65% r.h. before testing was done.

For each of the tests, a total of 10 samples was cut on each material. Where the material was tested in both the warp and filling direction, 10 tests were made in each direction.

The data obtained is difficult to study and evaluate. The results of each test were reduced to an equivalent figure called the "rating" because the data were difficult to evaluate. This rating is the test result expressed as a percentage of the value for the "control" that was taken from the fabric without resin treatment.

For example, the grab-tensile strength in the filling direction of Fabric A is 48.5 lbs. for the untreated sample and 35.2 lbs. for the 4% treated. This formula results in the untreated rating being $48.5 \div 48.5 \times 100 = 100$ and the 4% rating being $35.2 \div 48.5 \times 100 = 73$.

Certain tests that obviously gave illogical results were discarded.

The tear strength of the fabric in its weakest direction was felt to be of major interest. In most commercial fabrics this will be the filling direction, and such was the case for these three fabrics. Only the data in the filling direction were considered.

The total scores for the various tests indicate that the presently used tests are not the most suitable. The strip-tensile test obviously does not give an indication of tear strength.

The tests indicate that the cotton fabric loses tear strength as the resin content is increased. Most of the tests indicate that the rayon fabrics lose tear strength as the resin content is increased, but the rayon fabrics are less affected than the cotton.

At 8% nominal resin content, the impact-tear strength of the cotton has lost 31% of its original strength while the plain-woven rayon has lost only 10% of its original strength. This difference is believed to be due to the lower crystallinity of the rayon fiber that can accommodate the inclusion of the resin without becoming brittle.

The various tests indicate that the gabardine-twill rayon behaves differently from the plain-weave rayon during the tearing tests. With a 16% nominal resin content, the twill has lost 20% of its strength while the plain weave has lost 30%. With the faster rate and different conditions of the impact tear test, these relative positions are reversed with the twill losing 30% and the plain weave losing 19%.

With the exception of the burst test, the tests show a remarkable increase in tear strength with the inclusion of softener.

Central Section AATCC

How Sodium Sulfoxylate Formaldehyde Acts as a Vat-Dyeing Reducing Agent

► Sulfoxylate has controllable reduction powers that make its use advantageous in many applications. Further study is revealing more about the Redox potential and this paper is not conclusive in that respect.

The use of sulfoxylate as the primary reducing agent in vat dyeing offers advantages in applications where any of the following factors are desired:

Slow rate of exhaustion
Controlled rate of exhaustion
Controlled strike
Dyestuff stability at elevated temperatures
Stability of reducing agent at elevated temperatures
Control of pH factor during reduction and dyeing

The principal disadvantage is the difficulty of determining optimum application conditions for the leucos of some of the dyestuffs. These leucos apparently were characterized by reduced affinity, particularly for cotton fiber, and resulted in loss of color value compared with normal hydrosulfite leucos. The most likely solution to this problem appears to be the determination of optimum pH and temperature ranges for individual dyestuffs and fibers.

Reduction potentials with sulfoxylate are comparable to those with sodium hydrosulfite. The potentials developed at temperatures of 160° F. and upwards are sufficient to accomplish satisfactory dyeings. The behavior of many vat dyestuffs in sulfoxylate reduction indicates a desirably slow reduction and exhaustion, particularly in batch-type operations. Excellent production dyeings were made on cotton yarn in package form using sulfoxylate, both without hydro and with hydro. An evaluation of vat dyestuffs on mercerized and unmercerized cotton disclosed that, although quality of the dyeings was improved by slower exhaustion rates, many of the leucos did not possess enough affinity for the fiber to give color values comparable to the hydro controls. In most cases this disadvantage could be obviated by the use of a small quantity of hydro at the end of the dyeing cycle.

Indanthrone Stability Up

The stability of the indanthrones was found to be improved, at high temperatures, by the use of sulfoxylate as the reducing agent, and there were indications that other groups were similarly affected to a lesser extent. The advantages of higher application temperature are well known. The experimental work in continuous applications was not sufficiently complete to make specific recommendations; but the low strike, the minimized differential exhaustion of dyes used in combination, and the high-temperature stability indicate good possibilities for any applications. Experimental dyeings on viscose rayon indicated promising possibilities due to easier control of rate of exhaustion and pH of dyebath. High reduction temperatures could be used with minimized instability of some of the unstable dyestuffs.

There is one precaution that must be taken and that cannot be overemphasized if success is to be achieved by any of the prescribed sulfoxylate methods. If a pigment method is used, dispersed-type dyes must be used, the dispersion must remain stable, and great care must be exercised to prevent agglomeration before reduction occurs. If agglomeration does occur, particularly in heavy shades, the dyeing will be spotty but can be corrected by re-reduction with hydrosulfite better than with sulfoxylate. This disadvantage of the sulfoxylate method is somewhat more critical than with hydro.

Sulfoxylate Acid Leucos More Heat Stable

In the production of acid leucos, sulfoxylate appeared to offer advantages over hydro in that pH control was easier and the acid vat was more stable in high-tem-

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Maximum production of quality yarn with capacity varying from 900 to 1500 pounds of dry warp per hour.

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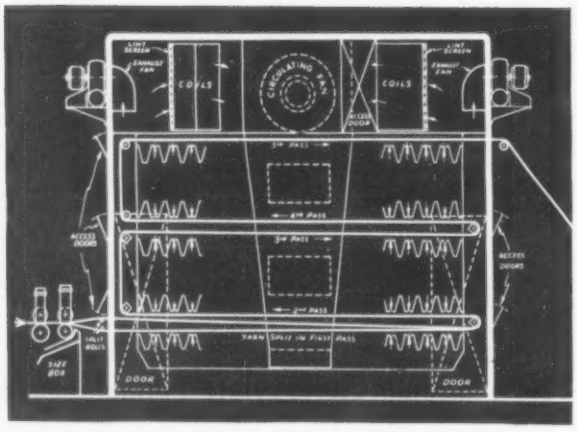
EASY TO CLEAN

Complete accessibility to heating coils, fans, air ducts, warp and dryer housing is provided for easy cleaning.

MINIMUM FLOOR SPACE

Housing is approximately 14'x12'-6'' high x 9'-10'' wide accommodating 60' wide warp. Other models are available for wider warps.



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perature applications. A practical method of over-dyeing vat and azoic-effect fabrics was found in which the sulfoxylate reduction bath, under proper conditions, does not affect the underlying pattern. By a variation of the same method, vat-redye adds can be made very simply without any loss in color of the original vat dyeing.

Tests on fastness of the sulfoxylate dyeings did not disclose any depreciation (as compared to the normal listed ratings of individual dyestuffs) from any inherent properties of the dyes. Any depreciation was attributed to other factors that normally cause such losses.

It must be emphasized that the results should be considered only as a progress report on the investigation of the subject. Broadening of the scope of the subject prevented a complete study of all possible phases. One important aspect of this study that would be invaluable, but which was not possible to complete in the time allotted, is the spectrophotometric analysis of the leucos obtained and correlation of this data with the other significant factors in the reduction and dyeing cycles, such as the Redox potentials. Such an analysis, as described by Royer, is anticipated in connection with future investigation.

The investigation is being continued and it is possible that many of our conclusions will be modified in the light of further findings. This statement is particularly applicable to the rapid developments during the latter stages of this study in which findings relative to influence of pH factor must be considered as a basic modification to data contained herein.

Northern New England Section AATCC

How Dye Structure Affects Dyeing Characteristics of Hydrophobic Fibers

► Dispersed acetate dyes, as a class, give better results than do acid or basic dyes on the hydrophobic fibers.

► Specialized dyeing techniques will become less necessary when the dyes themselves act as their own bridging agents.

Dyeings of various classes of dyestuffs on hydrophobic fibers show that a positive affinity is attained with dispersed dyes.

The acetate dyes act as bridging agents between the aqueous dyebath and the fiber. The fibers are best colored with dyes having hydroxyl or ketonic groupings. The hydroxyl groups may be in the side chain as an alcohol or in the ring structure as a phenol or napthol.

Sulfonic or carboxylic groups in the dye molecule detract from the dyeing of most hydrophobic fibers. These groups are present for solubilizing or because the dye is for a natural fiber as well. Nylon is the apparent exception to this rule, however, because the polyamide linkage resembles wool in dye selectivity.

The specialized techniques—cuprous-ion mordanting, swelling agents, high-pressure methods, prepolymer mix additives—appear to be application bridges. Some of these techniques will disappear as newer dyes are synthesized. Such new dye molecules should go far to enable union dyeing of blended fabrics.

Mid-West Section AATCC

Temperature and Humidity Affect Synthetics in Fade-Ometer Tests

► Tests conducted in the Fade-Ometer at various temperatures and humidities showed that, on most synthetic fibers, temperatures over 175° F. were too severe to correlate with ideal outside exposures.

A series of tests was conducted on two groups of fibers:

Group 1: acetate, Dacron, Dynel, nylon, and Orlon 41—disperse colors

Group 2: wool, Acrilan, nylon, and Vicara—acid colors

Selected dyes from each class were used to dye a light shade and a dark shade on yarns made from each of the fibers in the two groups. Dyeings were made by standard commercial procedures.

Knit sock samples were made of each dyeing for the Fade-Ometer tests.

Nine sets of exposure conditions were set up on a special experimental-model Fade-Ometer. Two sets of conditions were set up on a regular FDA-R Fade-Ometer. Two sets of exposures were made on a roof in Chicago, Ill.

Evaluation of results was made against the Grey Scale by three different judges.

Conclusions reached by the judges were:

1. Increase in temperature affects fibers and dyes more than increase in relative humidity.

2. More definite patterns of behavior can be attributed to fiber peculiarities than to dyes.

3. Increases in temperature affect the color on nylon and Dynel more than on Orlon, Acrilan, and Vicara. Acetate, wool, and Dacron were affected very little.

4. Relative humidity increases affected nylon and Vicara moderately, other fibers very little.

Student Contest
PRIZE WINNER

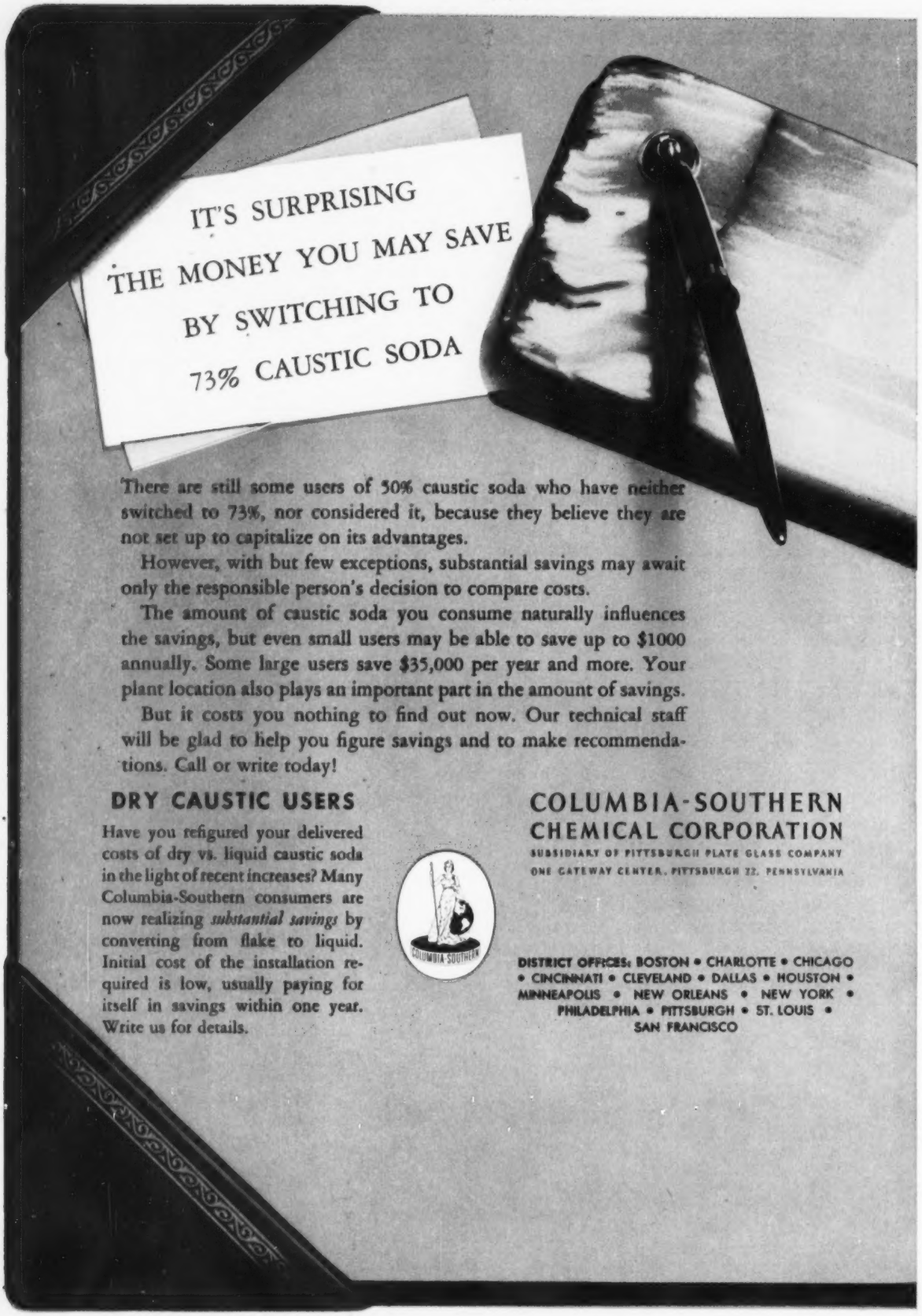
Dyeing Union Shades On Dacron-and Orlon-Wool Blends

► Butadiene-type latices of acrylonitrile help union dyeings considerably; and improved results can also be obtained by using lignin sulfonate, reducing at 60° C. for 30 mins., and adding ammonium tartrate.

By LONNIE T. HOWARD
PAUL N. ROBINETTE
CHARLES B. SIMPSON
FITZHUGH L. WICKHAN
Clemson College

Small amounts of acrylonitrile latices markedly increase dye pickup of several

(Continued on page 252)



There are still some users of 50% caustic soda who have neither switched to 73%, nor considered it, because they believe they are not set up to capitalize on its advantages.

However, with but few exceptions, substantial savings may await only the responsible person's decision to compare costs.

The amount of caustic soda you consume naturally influences the savings, but even small users may be able to save up to $1000 annually. Some large users save $35,000 per year and more. Your plant location also plays an important part in the amount of savings.

But it costs you nothing to find out now. Our technical staff will be glad to help you figure savings and to make recommendations. Call or write today!

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Have you refigured your delivered costs of dry vs. liquid caustic soda in the light of recent increases? Many Columbia-Southern consumers are now realizing *substantial savings* by converting from flake to liquid. Initial cost of the installation required is low, usually paying for itself in savings within one year. Write us for details.

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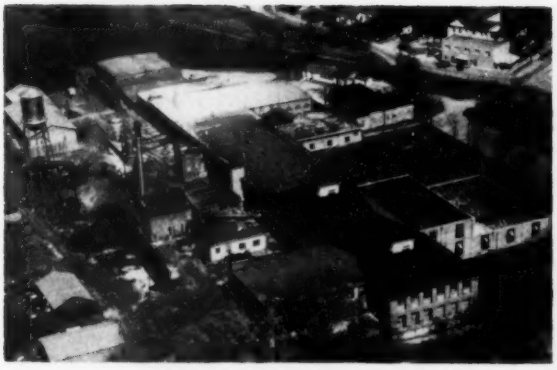
Exploring

The Textile Community

Aftermath of Disaster: A Community Comes Back

By MILDRED BARNWELL ANDREWS

From this . . .



. . . to this . . .

. . . in a matter of seconds. But out of tragedy has grown a strong community fellowship.

SATURDAY the 18th of April started out as a peaceful day of rest down in Alabama. As usual, the mill was closed for the week end. The employees, in that mid-spring season of the Deep South, were glad to have the time for their gardening or fishing or just plain loafing. That the employees were not at work was the only good thing about that Saturday. For suddenly, from over the mountain a terrific wind of cyclonic force dipped down into the pleasant little valley where the town of Siluria lies and struck a deadly blow at Buck Creek Cotton Mills and its village.

In a matter of seconds, the mill was unroofed and two-thirds of its second story destroyed. All the departments were damaged beyond usefulness. The warehouse, the wastehouse, and the boiler-room stack were down; and the debris carried along with it some 800 feet of "cyclone" fence.

All the houses of the village felt the impact of the storm. Twelve houses were completely demolished; 65 more were unroofed and their interiors greatly damaged. Almost every house was damaged to the extent, at least, of losing all windowpanes. The beautiful trees of the little town were twisted down or torn apart. What had been one of the prettiest little mill communities in the South was left a shambles.

In the wake of the catastrophe, the mill's 600 employees and their families were shocked and bewildered. Many were injured, though, fortunately, none was seriously hurt. One fatality occurred: an elderly person who died of a heart attack and shock.

Numbed by tragedy, the people of Siluria poked through the ruins of their once-attractive community. They wondered dully what sort of future was in store for them. Where were their jobs if their mill was gone? Where would they live and work? An atmosphere of depression and worry hung over them all.

By Monday morning, however, a new spirit prevailed in the village. J. T. Phillips, chairman of the board of Buck Creek Cotton Mills, had moved in with his usual aggressive spirit and leadership. He let the employees know that they would not suffer from lack of work; that somehow, and as soon as possible, the mill would be put back in shape and the town rebuilt.

It was a sizable order. The damage to the mill, on which $2½-million had been spent in modernization within the past 8 years, was estimated to be at least $1½-million. But Mr. Phillips' courageous attitude instilled confidence in the community.

More than that, the program of rebuilding has been entered into with the zest of good American citizens who still have the guts to overcome disaster. They have been willing to work at any job to preserve their future jobs, their family life, and their community. The restoration of Buck Creek Cotton Mills has been largely a community project. And in December or January, at the latest, the plant will be in full-scale operation again.

Chairman Phillips, taking stock of the situation in a realistic way, faced the

(*Continued on page* 192)

Can't get a Nap?

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Pointers FOR SUPERVISORS

The Supervisor's Span of Control

► A foreman can adequately control only as many workers as he can adequately communicate with

► His dealings with the work group have to be established through two relationships: with the assistant foremen and directly with the workers themselves

By **JAMES E. GARDNER,** Assistant Director of Personnel Research, Fieldcrest Mills

HOW MANY EMPLOYEES can a supervisor effectively supervise?

This question, of major importance in the organizational development of all industrial companies, has usually been answered in terms of the "span of control." While there is little agreement on specific numbers, there is fairly widespread acceptance of certain factors that are believed to limit the size of the work group a supervisor can effectively control. A few of these factors are: the nature of the operations being performed by the employees, the multiplicity of these operations, the type of supervisory or control functions that are required to be performed, the characteristics and capabilities of individual supervisors, and the necessity for communications between supervisor and worker.

Communication Is The Key to Control

The role of communications in determining a supervisor's effective span of control has not always been given the emphasis it deserves. It is the purpose of this article to examine briefly the relationship between communications and control.

There are two propositions that experience tells us are true:

1. Adequate control is impossible (or, at best, very difficult) without adequate communications.

2. A supervisor can adequately control only as many employees as he can adequately communicate with.

We can go a step further to state that "adequate" communications require frequent face-to-face contact between the supervisor and the individual employee.

It is conceivable that a supervisor could use the written word exclusively to communicate with his employees concerning all those factors over which the supervisor is normally expected to exercise some control: work assignment, labor cost, waste efficiency, quality, attendance, discipline, etc. But complete reliance upon writing would be absurd. For a supervisor to control his employees and those aspects of departmental operations affected by employees, the employees must understand what is expected of them. They cannot achieve all the necessary understanding simply by reading messages, notices, etc. posted on the bulletin board. Someone has to talk with them. The written word is insufficient for downward flow of information.

Workers Need a Chance To Speak Up

In addition, sole reliance or strong reliance on the written word leaves us with practically no avenue of communication from the employee up the line to his supervisor. There can be no genuine control (of a desirable sort) over employees unless they are given an opportunity to express their point of view, opinions, and complaints to their supervisor. Effective control boils down to a willing acceptance by employees of certain rules of conduct and standards of job performance. Such acceptance is not forthcoming unless employees can speak their piece. Moreover, a supervisor is in a much better position to control his employees if he knows what's on their minds.

All these considerations appear to lead back to this conclusion: Communications are the vehicle of control; control can go only as far as effective communications carry it.

In a textile-mill department, we usually assume that the hierarchy of authority is well defined, that the workers report to the assistant foremen, and the assistant foremen report to the foremen. We assume that the control functions of the foreman are exercised through the assistant foremen.

If these assumptions proved true in actual practice, the problem of span of control would involve only (1) the relationship between the foreman and his assistant foreman and (2) the relationship between the assistant foremen and the workers. We would worry only about these questions: Does the foremen have too few or too many assistant foremen for effective control of them? Does the individual assistant foreman have too many or too few employees to look after?

The Foreman-Worker Relationship

These assumptions are false in many instances. The steps of authority are not always clear-cut. There is a third relationship to be considered: the direct relationship between foreman and workers.

In some departments the communications between worker and assistant foreman are chiefly concerned with immediate work matters such as job instruction, work assignment, special instructions, machine maintenance, condition of materials, etc. On matters of workloads, rates, job rights, seniority, and promotion, the employees may tend to communicate directly with the foreman. This procedure may arise from a feeling among employees that the assistant foreman has no real authority in these latter matters and can only refer them to the foreman. Whatever the explanation,

(*Continued on page 210*)

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save $11 every 8 hours on one machine!

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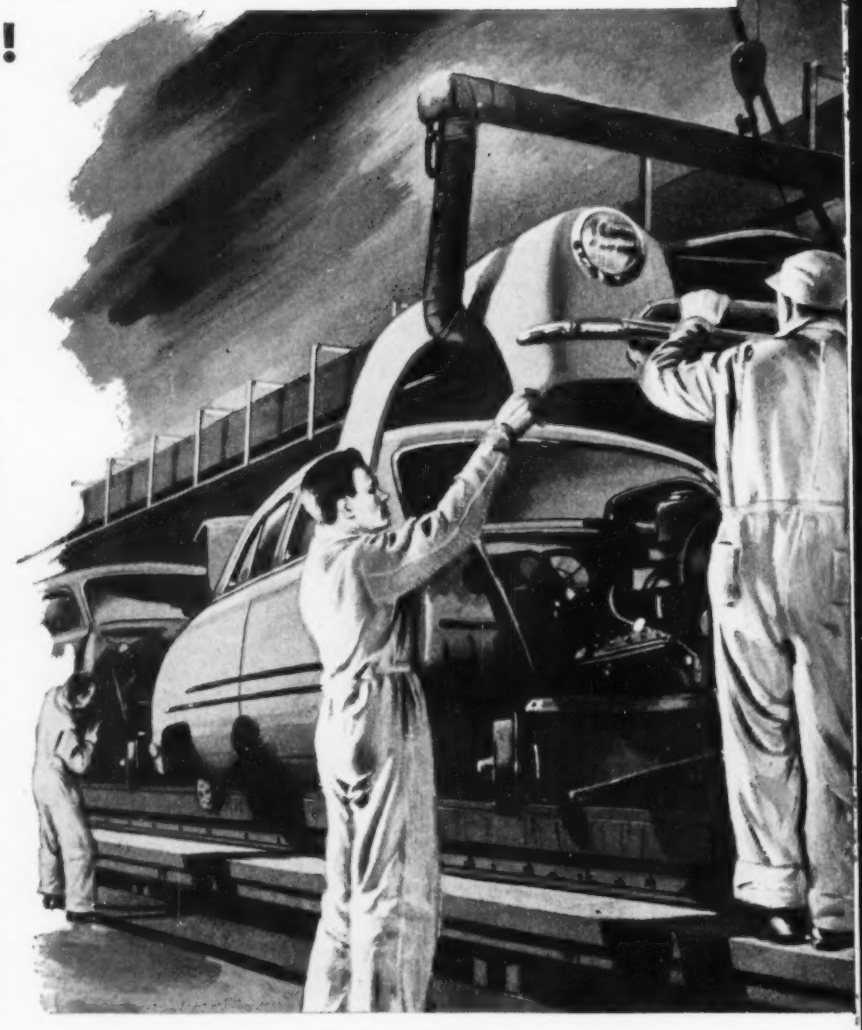

Lubrication trouble on a vital machine in a big Detroit automobile plant. Gallons of oil being wasted. Man-hours climbing. Spilled oil creating a major housekeeping problem—hazardous working conditions.

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TEXTILE Equipment NEWS

Transfer Yarn From Spring To Tube and Back Without Winding

A yarn transfer machine that will remove yarn from mill-wound paper tubes onto dye-machine springs in a single operation has been patented and is being made by Yarn Transfer Devices, 2033 West Charleston St., Chicago 47, Ill. The process is reversible; after dyeing is completed, the yarn may be placed on a shipping tube again without winding.

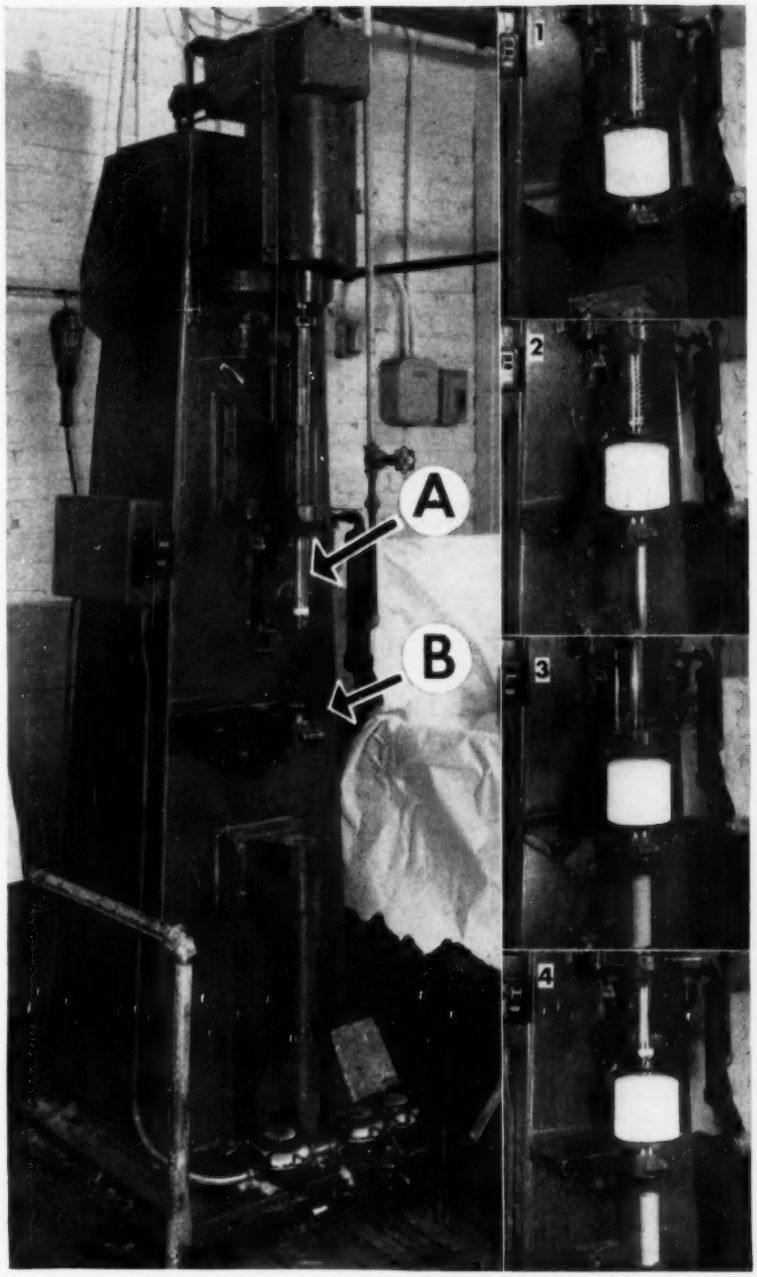
One operator can transfer 3,000 to 4,000 lbs. of yarn in 8 hrs., regardless of yarn size. According to figures calculated on operations involving over 10-million lbs. of yarn, the makers claim economies in winding costs up to 93% over the old method. One unit occupies 6 sq. ft. of floor space against equivalent winding equipment of 400 spindles.

How It Works

The yarn is wound by normal winding procedures onto 1¾-in. paper tubes covered with a knit sock. At the dyehouse the package is placed on the machine and a spring is inserted as the tube is punched out. No damage is done to the yarn or the paper tube, according to the manufacturer.

Electrically controlled pneumatic jaws grip the spring, contract it to reduce its diameter, and insert it into the package as the paper tube is removed. As the spindle is withdrawn, the spring resumes its normal diameter. Time for one transfer is about 7 secs.

Fixed cost per pound for the transfer operation is $0.0025 against total costs from $0.009 to $0.034 for winding. Inventory of springs is reduced and labor economy varies from $0.0065 to $0.0315, depending on the yarn size.



A TRANSFER SEQUENCE shows: (1) a contracted spring on spindle *A* poised over the package on bracket *B*; (2) the package-positioning shaft centers the tube; (3) the spring has been inserted and the tube removed; and (4) the package is ready for dyeing.

Circle T-1 on Reader Service Card

Three-Delivery Gill Reducer For Intermediate Drawing

THIS THREE-DELIVERY GILL REDUCER is said to open the bottleneck at the intermediate drawing operation.

A new three-delivery, single-head gill reducer has been announced by Holdsworth Gill Screw Co., Pawtucket, R. I. This machine, it is claimed, opens the bottleneck at the intermediate drawing operation. Production flows directly through the set, which consists of a two-delivery breaker, a three-delivery intermediate, and a four-delivery finisher gill reducer. Each of the three reducers produces the same total sliver weights while operating at the same draft. The result is a balanced set that makes fuller use of the fiber, manpower, and floor space. The machine is marketed by Atkinson, Haserick & Co., Boston 6, Mass.

Circle T-2 on Reader Serice Card

Celanese Is Licensing Its Tricot Stop Motion

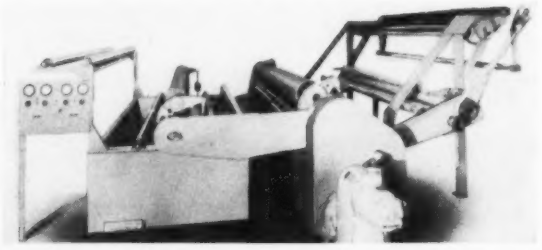
The patent held by Celanese Corp. of America on an electronic fabric-scanning device for tricot machines has been made available to any tricot mill on a royalty-free licensing agreement.

The Celanese device has a small carriage that carries a photocell and light across the fabric to detect defects. When a broken thread, stripped-down thread, or broken needle is detected, the tricot machine is stopped immediately. The devices now in use are good only for plain fabrics; however, certain repetitive patterns can be run with additional equipment.

The Photo Bell Co., New York, N. Y., has agreed to build the scanning device for licensed companies.

Circle T-3 on Reader Service Card

Machine for Cotton Carpeting Finishes, Extracts, and Folds



THIS COMBINATION MACHINE applies finish, extracts, and folds cotton carpeting. A vacuum extractor after the squeeze rolls raises the pile.

A combination machine for applying finishes, extracting, and folding cotton tufted carpeting has been announced by Birch Bros., Inc., Somerville, Mass. The machine is said to give a complete penetration and saturation, which is quickly followed by squeeze rolls (15-ton capacity) and a patented vacuum extractor. The vacuum extractor removes additional moisture and raises the pile. This procedure is said to leave the smallest remaining moisture content.

Pressure on each end of the squeeze rolls is separately regulated.

Circle T-4 on Reader Service Card

New 28-Gauge Raschel Machine Uses up to Five Guide Bars

A new raschel machine in the fine-gauge field has been developed by Robert Reiner, Inc., Weehawken, N. J.

This raschel unit is a 56-gauge knitting machine with up to five guide bars. The 56 gauge is equal to 28 needles per inch.

The machine is especially adapted to knitting elasticized fabrics, including power net. Also, the machine knits synthetic yarns in sizes comparable to those used in tricot knitting, and it has successfully knitted 80s cotton yarn.

The speed of the unit is close to the speed of a three-bar tricot machine having the same number of needles per inch. At this speed, its ability to handle up to five guide bars is an advantage.

In producing two-bar fabric, the machine can operate at a speed close to 400 to 425 stitches per minute. On four-bar power fabric, the knitting speed ranges from 350 to 400 stitches per minute.

It has open cams; previous models had closed cams. It handles 14-in. and 21-in. flange-diameter beams.

The needles and guides have been shortened. Both are about two-thirds the length of conventional raschel needles and guides. The needles are cast in half-inch leads as contrasted with 1-in. leads used in normal raschel knitting. The guides, however, are cast in conventional 1-in. leads. The needle stroke has been changed in accordance with the reduction in needle length. This is made possible by short-stroke cams.

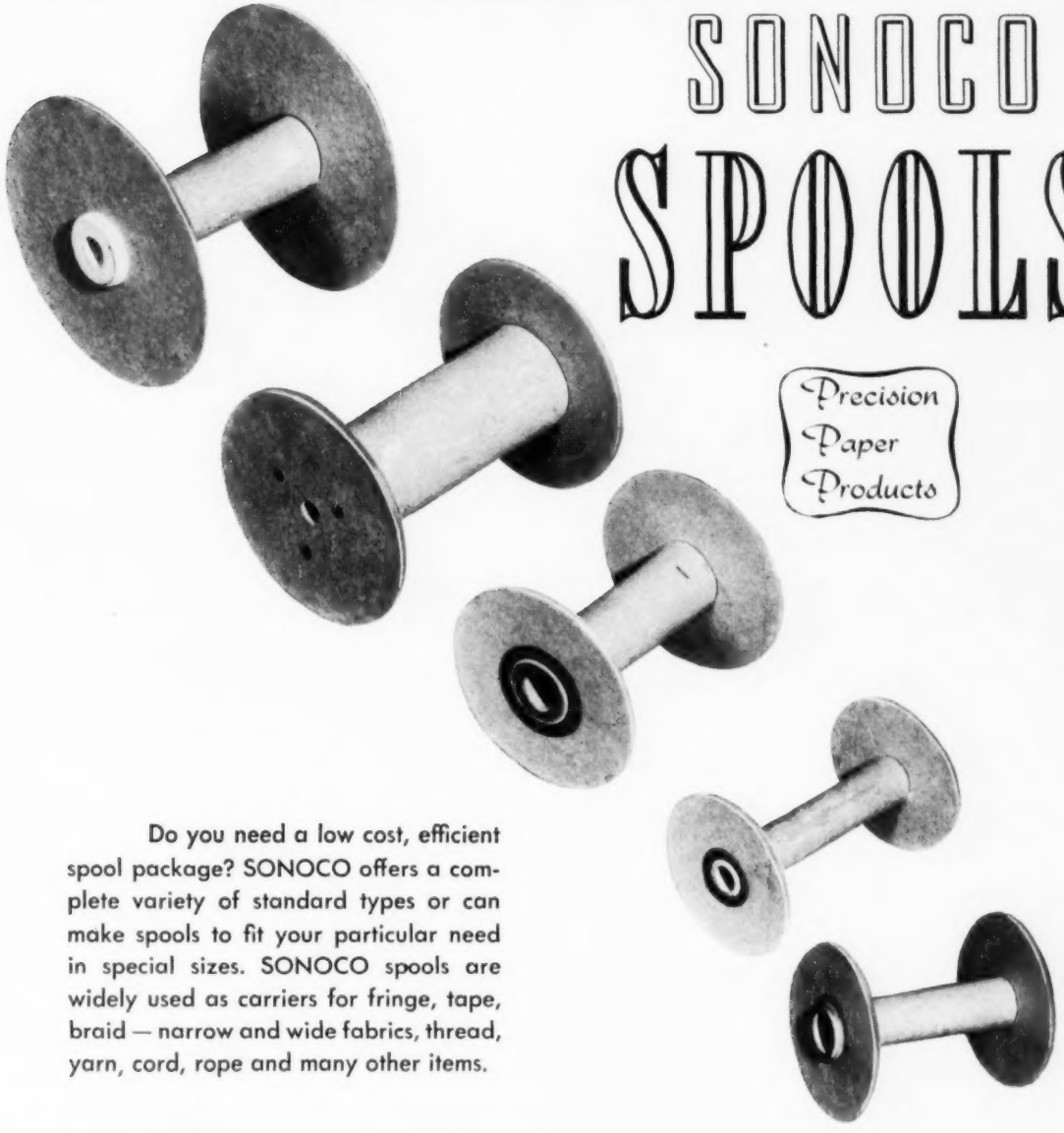
The new model is available with pattern wheels or chain links.

Circle T-5 on Reader Service Card

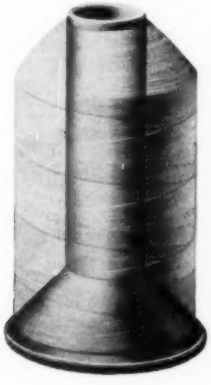
SERVING THE TEXTILE INDUSTRY SINCE 1899

SONOCO SPOOLS

Precision Paper Products



Do you need a low cost, efficient spool package? SONOCO offers a complete variety of standard types or can make spools to fit your particular need in special sizes. SONOCO spools are widely used as carriers for fringe, tape, braid — narrow and wide fabrics, thread, yarn, cord, rope and many other items.



SONOCO can also supply standard or special order tapered base, single head thread spools. Barrels can be furnished scored, and with smooth, flocked or ground surfaces, with color lacquer tips for special identification.

SONOCO AROUND THE WORLD PAPER CARRIERS

REG. U.S. PAT. OFF.

SONOCO PRODUCTS COMPANY

MAIN OFFICE—HARTSVILLE, S. C.

MYSTIC, CONN. LOS ANGELES, CAL. BRANTFORD, ONT. LOWELL, MASS.
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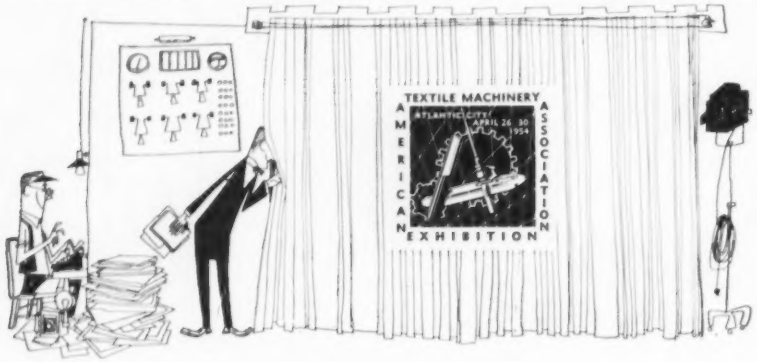
DEPENDABLE SOURCE OF SUPPLY

For more information, write direct or use Reader Service post card.



TW has been peeking . . .

behind the curtain of the April Textile Exhibition

Here's what we saw that you might be looking forward to:

▶ FINISHING: H. W. Butterworth & Sons Co. will feature important improvements in its automatic cut-off winders. These improvements involve the cut-off, frictions, and the starting of a new batch.

▶ WINDING: American Lava Corp. will display its new AlSiMag thread guides. These guides are manufactured to standard specifications or to special design for individual mills.

▶ POWER: Arrow-Hart & Hegeman Electric Co. will show a new loom switch, plus a new line of lintproof enclosures for magnetic switches.

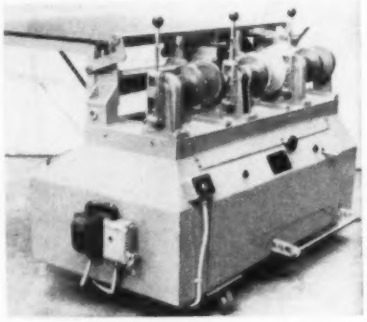
▶ YARN: Cen-tennial Cotton Gin Co. will exhibit its SRRL-type opener. This machine opens, cleans, and blends cotton, synthetics, and wool at any rate from 1 to 2,000 lbs. per hr.

▶ WEAVING: Crompton & Knowles Loom Works is planning to exhibit its new W-3AC filling-mixing worsted loom with a 2x1, box, eight-harness end cam, and one-color rotary magazine.

▶ FINISHING: Birch Bros., Inc. will show a new high-speed, ball-bearing counterbalanced tacking machine that makes a chain stitch, which is easily removed after processing.

Watch this panel each month for more peeks at the equipment to be shown at the American Textile Machinery Exhibition in Atlantic City next April 26-30.

Warper for Narrow Fabrics Takes Range of Bobbins



WARPER FOR NARROW FABRICS runs at 10 to 100 yds. per min. Three heads are standard, but one-head and two-head warpers are also available.

A new warper for the narrow-fabrics industry is being produced by Swindells Engineering Co. Ltd., Macclesfield, England.

Compact and self-contained, the new warper is available with one, two, or three heads (normally three are supplied). It is built to wind from overend or revolving bobbin creels onto flanged bobbins of various types and widths.

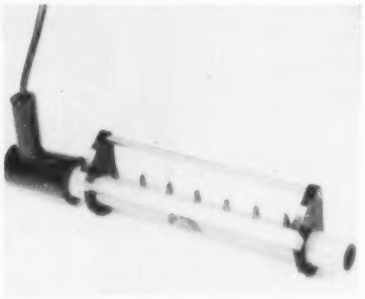
Speed range is from 10 to 100 yds. per min. Yarn speed is constant throughout the warping period.

An electrical circuit stops the machine automatically at a predetermined yardage and also may be connected to a broken-end stop motion on the creel. The traverse motion can be varied in a stepless range from ¾ in. to 6 ins.

A totally enclosed cam effects the traverse motion. The limit of travel of the traverse bar, which carries the guide reeds, can be varied.

Circle T-6 on Reader Service Card

Static Eliminator Neutralizes Charge



THIS ANTISTATIC DEVICE ionizes the adjacent air to neutralize static charges.

An electrical device to eliminate static electricity has been developed by Herbert Products Inc., Woodhaven, N. Y.

The device supplies a harmless source of high-voltage electricity to neutralize material at points where static charges occur.

The Oxy Cold Bar is applicable to warpers, drawing frames, cards, slashers, plaiting machines, printing machines, etc.

The units are easily installed in confined places and require no maintenance. Lengths: from 6 to 100 ins.

The air between the emitter points of the bar and the surface of materials is ionized, and free electrons are released from the surrounding air molecules.

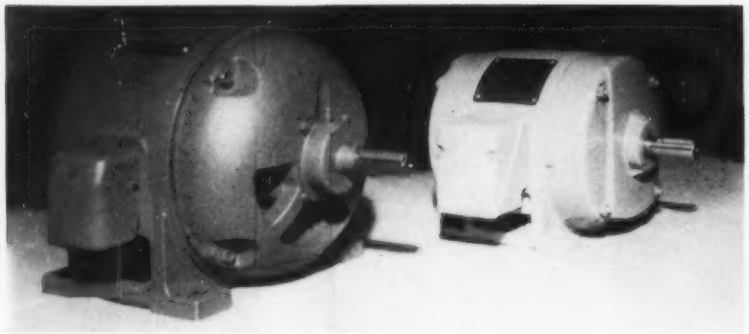
When an unbalanced or static-charged surface passes this ionized area, the charge is balanced by the flow of electrons in the ionized air. Excess electrons pass to ground through the machine parts or an aluminum ground rod in the unit.

The Oxy Cold Bar is fabricated almost entirely of laminated plastics made by Synthane Corp., Oaks, Pa.

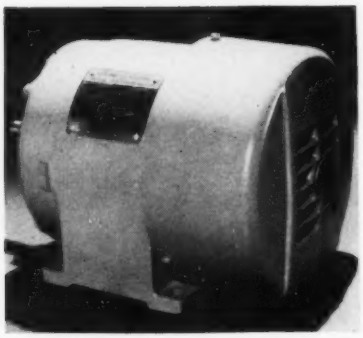
Circle T-7 on Reader Service Card

ALL
JACOBS
Loom Necessities
ARE
"Verybest"
THE BULLARD CLARK CO.
JACOBS
SOUTHERN
DIVISION
Charlotte, N. C.
NORTHERN
DIVISION
Danielson, Conn.

New Motors Are Smaller and Quieter



NEW 1½-HP. INDUCTION MOTOR (right) is about half as large and about 40% lighter than the older model (left).



FAN-COOLED MOTOR has a solid cast-iron stator and end-shield castings. Other features are new insulation and a better sealant.

A new line of polyphase a.c. motors, offering better protection, more efficiency, and quieter operation, has been announced by the General Electric Co., Schenectady 5, N. Y.

The motors are about half as large and as much as 40% lighter, horsepower for horsepower, than their predecessors.

The keystone of the insulation system is a new polyester film that is eight times as strong as previously used materials. It is used to insulate the phases and slot tubes in the stator—the points of hardest motor wear. This synthetic material, combined with Formex wire, an improved Glyptal varnish, and a silicone Dri-film dip, has withstood accelerated life tests and salt-spray tests.

The new bearing assembly is more tightly sealed and is lubricated by a grease that lasts at least five times longer than formerly used lubricants.

Over-all noise has been reduced, and the motor sound has been altered to a frequency more pleasing to the human ear. According to the GE engineers, the noise level of the new 10-hp. motor is as low as the former 2-hp. model.

Other improved maintenance features include permanently numbered nonwicking connection leads, a larger diagonally split conduit box, knock-off lugs on the end shields, and location of the combination nameplate-connection diagram directly over the box.

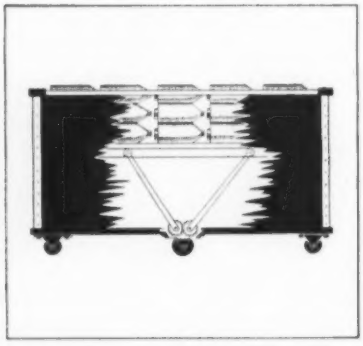
Although size and weight have been materially reduced and new design concepts incorporated, the new Tri-Clad 55 has a higher full-load speed rating and greater efficiency than the former motor, the engineers claim.

After the first of the year, the new motors will be available in the 182 and 184 frame sizes (1, 1½, and 2 hp. at 1,800 rpm.) in horizontal dripproof and totally enclosed fan-cooled models, and a complete line of generators.

Larger frame sizes will become available at regular intervals.

Circle T-8 on Reader Service Card

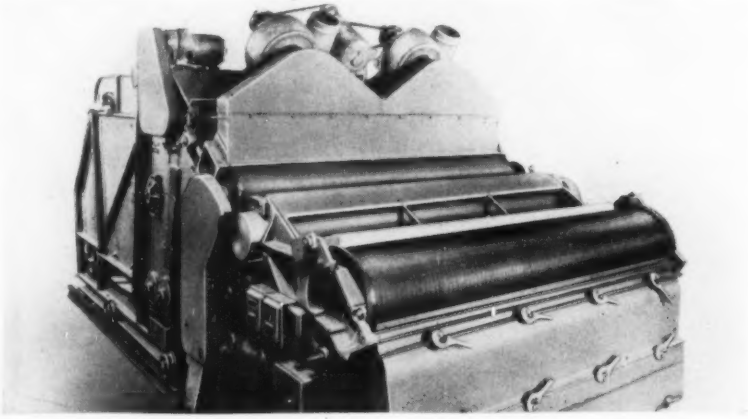
Truck Bottom Lifts As the Bobbins are Removed



THIS FLOATING-BOTTOM BOBBIN TRUCK keeps the load at working level. An automatic-spring lift raises the bottom as the bobbins are lifted out. This device is said to take the backstrain out of the roving man's job. Manufacturer: Excel Textile Supply Co., Lee Ave., Lincolnton, N. C.

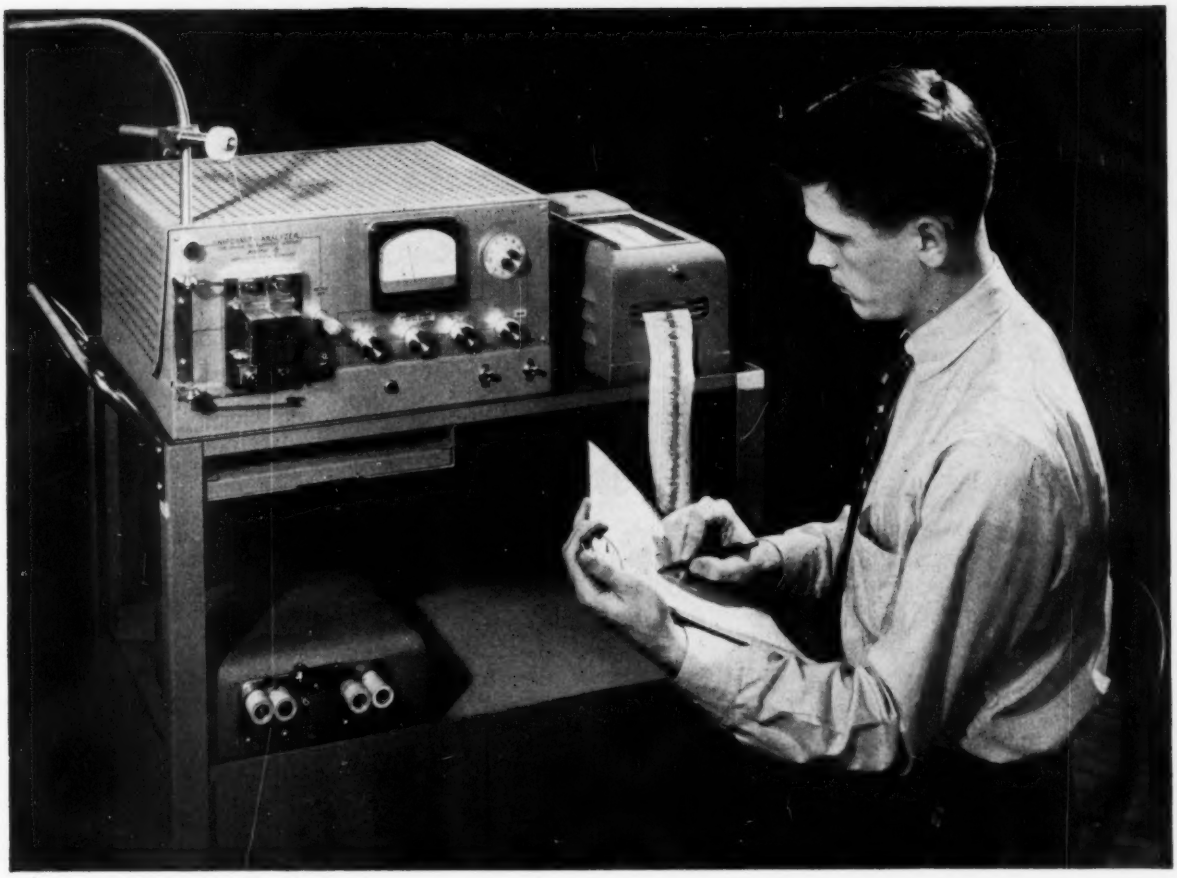
Circle T-9 on Reader Service Card

New-Model Random Webber Produces 84-in. Web



THE RANDO-FEEDER AND RANDO-WEBBER is now available in an 84-in. model, according to an announcement by Curlator Corp., East Rochester, N. Y. Preliminary tests indicate productions of 80 to 430 lbs. per hr. on waste and staple fibers. Thickness of the 84-in. web can be varied from "paper thin" to 2 ins. A 60-in. model is also available.

Circle T-10 on Reader Service Card



High speed testing...

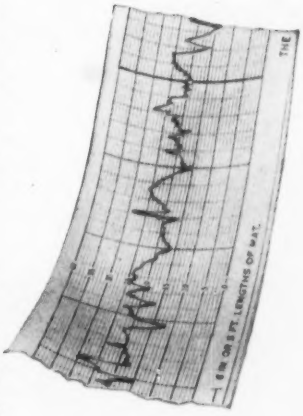
grades 1,000 feet of yarn in three minutes!

Here is the fastest method you can use to check and grade the uniformity of yarn, roving, or sliver. With the Brush Uniformity Analyzer*, you can test a 1,000-foot sample in little more than three minutes—a fraction of the time required by other methods. Thus the instrument is practical for regular mill service, in addition to research and development work.

The Uniformity Analyzer, originally designed by the Institute of Textile Technology, provides a definite numerical value for quality of the material. The chart record, which is available immediately, aids in trouble shooting, and exact quality control. The instrument can be operated by anyone after brief instruction.

You can depend on sustained high accuracy regardless of speed of testing. A zero line is recorded on the chart, thus reducing drift errors and changes in average yarn count. With the zero line recorded, the operator knows the true mean of the yarn sample. Three averaging circuits make it easy to spot periodic faults in the yarn. Long-term variations are apparent.

A staff of textile-trained engineers is available to assist you in application, service, and evaluation of data. In southeastern states our representative is W. A. Brown and Associates. For complete information, write Brush Electronics Company, Dept. GG-11, 3405 Perkins Ave., Cleveland 14, Ohio.



This sample chart of roving indicates gross deviation from nominal weight per unit length. Irregularities as short as ½ inch in a length of yarn can be detected.

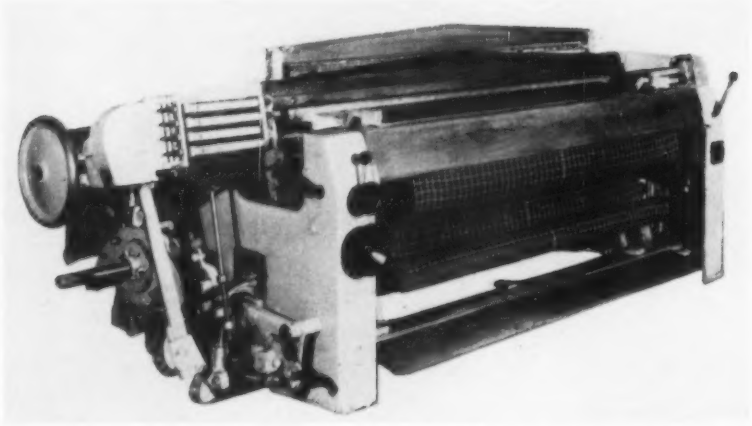
*Trademark

BRUSH ELECTRONICS COMPANY

formerly
The Brush Development Co.
Brush Electronics Company
is an operating unit of
Clevite Corporation.

INDUSTRIAL AND RESEARCH INSTRUMENTS
PIEZOELECTRIC MATERIALS • ACOUSTIC DEVICES
MAGNETIC RECORDING EQUIPMENT
ULTRASONIC EQUIPMENT

Low-Built Loom Is Quiet Running



STREAMLINED LOOM is said to be quiet running. With drop boxes, the loom works from punched steel links or from the dobby.

Redesigned and streamlined looms for weaving light and medium-weight cotton, linen, spun-rayon, and wool fabrics have been brought out by Richard Haase & Co., GmbH., Mischele, Westphalia, Germany. The streamlining of looms may be a fad, but it does represent an application of modern engineering techniques in an effort to help the weaver.

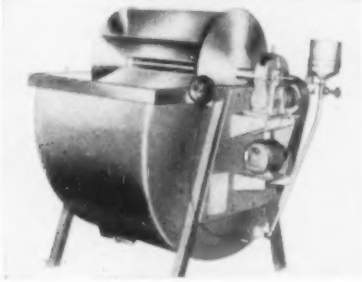
The frames of these low-built machines have two rigid sidewalls connected by four crossbraced members. The vibration-suppressing feet and the low center of gravity contribute to quiet running, which is said to be a feature of the loom.

The special underpick motion is the cone type, which is claimed to muffle the usual picking noise. Swells in the shuttle boxes are said to give a low and uniform checking to the shuttle. If drop boxes are used (up to four boxes at one or both sides), the boxes can be controlled from punched steel links or from the dobby. The dobby is mounted low on the loomside or may be replaced by an inside tappet motion.

The looms are equipped with worm-driven take-up rolls, and the cloth is wound on rolls driven by slipping clutches. Picks per inch can be adjusted without the use of change wheels. Warp beams with flanges up to 23.5 ins. in diameter can be accommodated, and provision can be made for larger flanges if required. The let-off is not automatic but is by rope, chain, or friction block. The back rest may be either fixed or revolving and may oscillate as required. It is claimed that no pick-finding is necessary, since the center filling-fork is said to stop the loom with the shed open.

Circle T-11 on Reader Service Card

New Paddle-Wheel Machine Is Stainless Steel



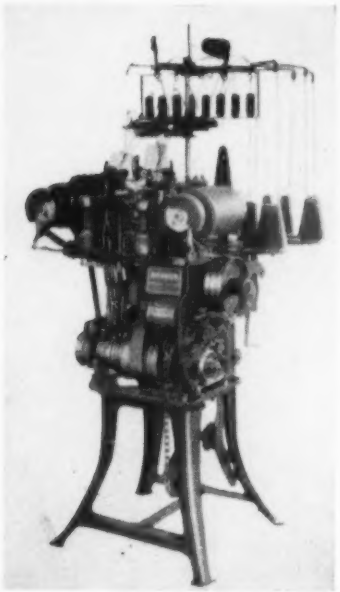
PADDLE-WHEEL MACHINE is all welded and all stainless steel. It is available in a wide range of sizes.

A new stainless-steel paddle-wheel machine has recently been announced by Klauder Weldon Giles Machine Co., Adams at Leiper, Philadelphia, Pa. This new machine is said to provide better and more consistent results on sweaters, socks, and other garments, as well as tapes and webbing. The machine is all welded and is available with or without a cover. It can be obtained in a wide range of sizes.

Splash covers protect the motor and drive mechanism. A heavy false bottom prevents damage in the event of overloading.

Circle T-12 on Reader Service Card

Overplaid Machine On Market



HEMPHILL'S SOLID-COLOR OVERPLAID MACHINE is now available for sale. It is described as the "only completely automatic solid-color overplaid machine in the world." Production is expected to be slightly under 3 doz. pairs of hose per 8-hr. period. The machine is said to knit all types of natural and synthetic yarns. Price: under $4,000. Hemphill Co., Empire State Building, New York 1, N. Y.

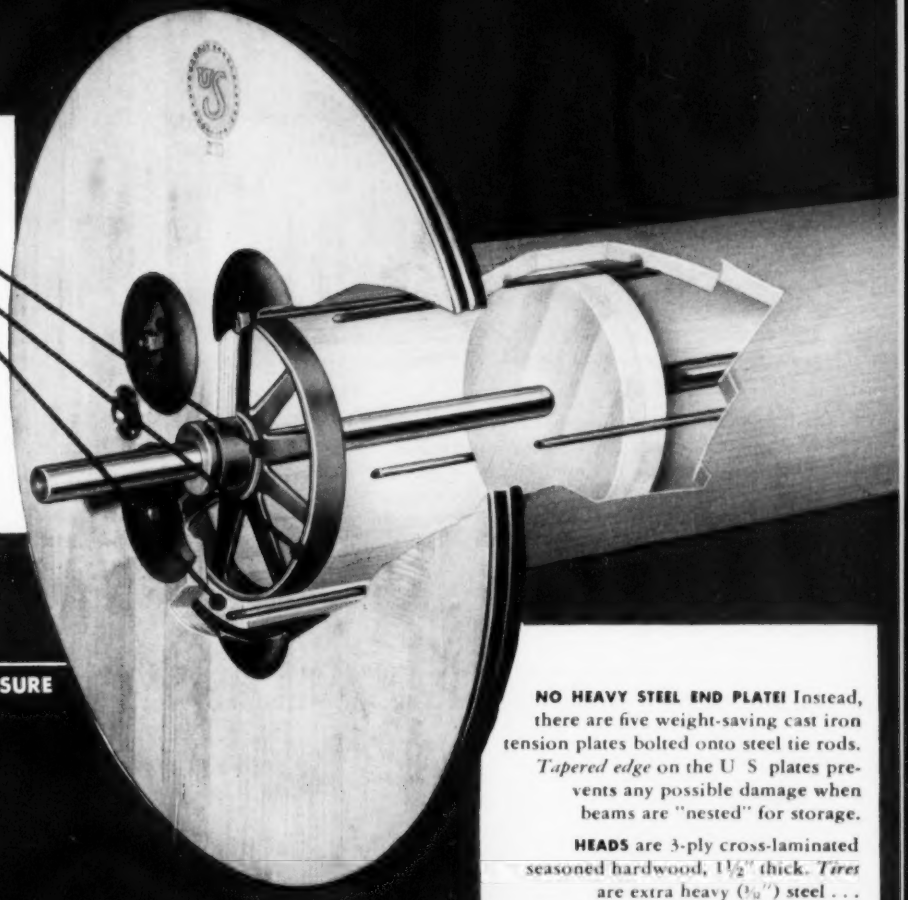
Circle T-13 on Reader Service Card

How To Attach Elastic To Men's Hose

ELASTIC BANDS can be attached to men's hose with simple modifications of the Merrow A-2D sewing machine (Merrow Machine Co., 28 Laurel St., Hartford, Conn.). The elastic strip is joined into an endless piece, and then the endless piece is sewed to the hose on a Merrow machine with only minor adjustments, a folding attachment, and a different presser foot.

Circle T-14 on Reader Service Card

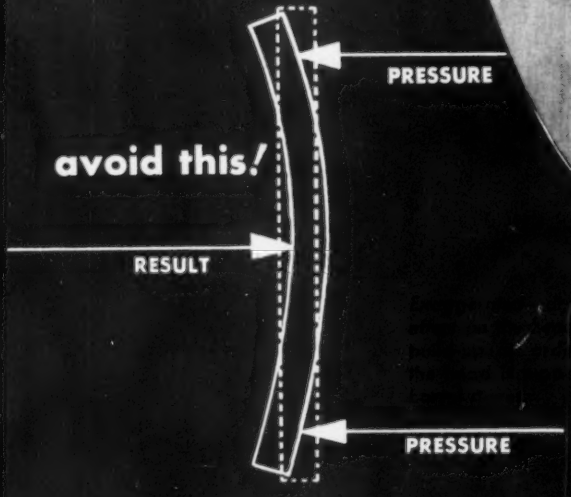
COTTON...spun rayon...and wool



3-POINT SUPPORT FOR THE BEAM HEAD

shoulder at hub of casting
periphery of casting
ends of staves

U S Warper Beams are *all* built with 3-point support, which provides additional resistance against outward deflection during build-up of the beam.



NO HEAVY STEEL END PLATE! Instead, there are five weight-saving cast iron tension plates bolted onto steel tie rods. *Tapered edge* on the U S plates prevents any possible damage when beams are "nested" for storage.

HEADS are 3-ply cross-laminated seasoned hardwood, 1½" thick. *Tires* are extra heavy (⅜") steel . . . grooved, heated and shrunk-fitted onto the heads for tighter assembly. Eastern pine barrel staves are supported at each end by round cast iron supports.

U S BOBBIN & SHUTTLE CO.

SEND FOR SET OF BLUEPRINTS
and Bulletin CWB
for detailed construction features of U S Warper Beams, Heads and Tension Plates for Cotton, Spun Rayon and Wool.

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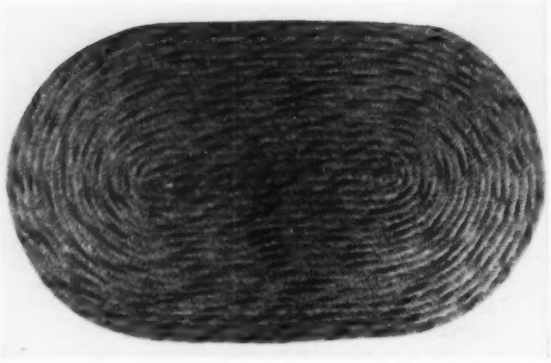
General Sales Office LAWRENCE, MASS.

Southern Division Headquarters 1912 Augusta Rd., GREENVILLE, S. C.
CHARLOTTE, N. C. JOHNSON CITY, TENN. LaGRANGE, GA.
PHILADELPHIA, PA. PROVIDENCE, R. I. MINNEAPOLIS, MINN.
DALLAS: O. T. Daniel, Textile Supply Co. LOS ANGELES: E. G. Paules, 1762 W. Vernon Ave.
CANADA: W. J. Westaway, Montreal, Que., Hamilton, Ont.

Machine Knits "Braided" Rugs

THIS FIDELITY MACHINE knits braided-type oval rugs at speeds up to 40 ft. per min. One operator can handle 10 machines.



A STANDARD 24x36-IN. RUG can be knitted in 3 mins. on the Sinfra machine.

A rug-knitting machine has been developed by Fidelity Machine Co., 3908 Frankford Ave., Philadelphia 34, Pa. The Sinfra knitting machine knits at speeds up to 40 ft. per min.; a standard 24x36-in. braided-type oval rug can be produced in 3 mins. The machine is said to be a "high-speed, automatically controlled machine designed for fast, economical production of superior rugs." One operator can handle 10 machines.

Automatic stop motions and other electrical controls are said to keep maintenance costs and downtime to a minimum. No rewinding equipment is needed since large-size cones can be used.

Circle T-15 on Reader Service Card

Lightweight Sections Are Made of Aluminum

ALUMINUM GRAVITY-CONVEYOR SECTIONS are being manufactured by The S. C. Baer Co., 1600 Times-Star Tower, Cincinnati, Ohio. The sections mate perfectly with existing steel sections and weigh about half as much as a comparable steel section. Standard straight sections are 5 to 10 ft. long, and 12, 15, or 18 ins. wide. Curved sections are reversible and are available in 30, 45, 60, and 90°.

Circle T-16 on Reader Service Card

Crane Truck Is Designed For Maintenance Work

A REVOLVING CRANE TRUCK with a capacity of 2000 lbs. and a height of 68 ins. is available from Market Forge Co., Everett, Mass. The power crane projects 24 ins. on either side of the truck. The truck is designed for maintenance work.

Circle T-17 on Reader Service Card

Toledo Scale Has Larger Platform

NEW-MODEL PORTABLE SCALE has an 18%-larger platform, but the over-all dimensions of the base have been reduced. The wheels are now within the base. Double pendulum is free floating. The manufacturer is Toledo Scales Co., Telegraph Road, Toledo 1, Ohio.

Circle T-19 on Reader Service Card

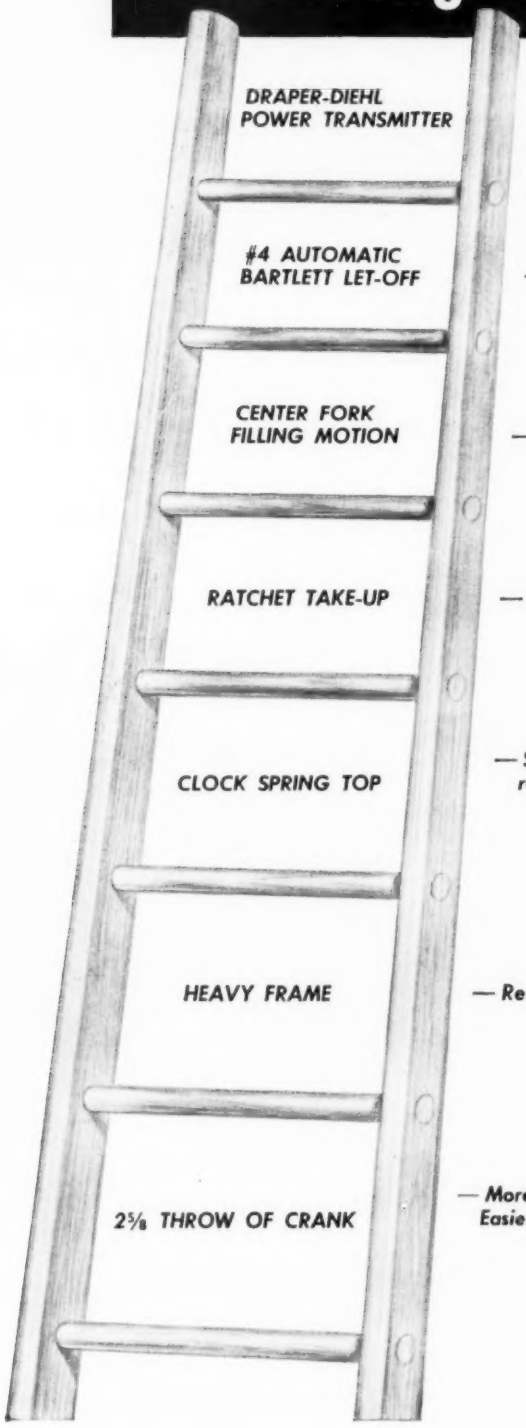
Southern Company Plates Tenter-Frame Pin Plates

Southern Textile Works, 202 S. Towers St., Anderson, S. C., is now equipped to plate tenter-pin plates with a noncorrosive finish. This plated finish is said to be resistant to acids used in connection with the plates, and it is said to be inexpensive and durable.

Circle T-18 on Reader Service Card

Climb to Success...

weaving QUALITY COTTONS



— *Reduced Fixing Cost.*

— *Increased Accuracy.*

— *Stops on Broken Pick.*

— *Matched pick goods.*

— *Smooth action, reduced wear.*

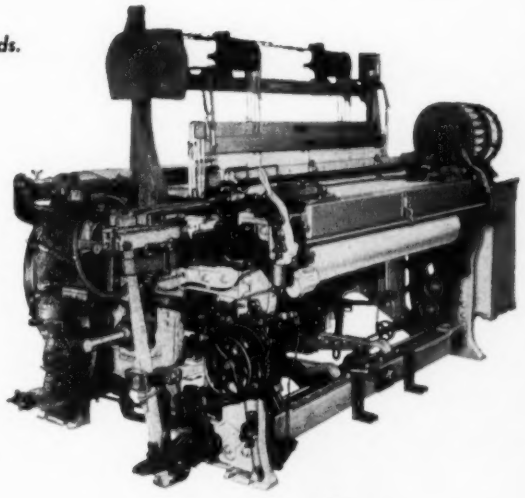
— *Reduced vibration.*

— *More Shuttle flight time — Easier boxing.*

on

DRAPER

X-2

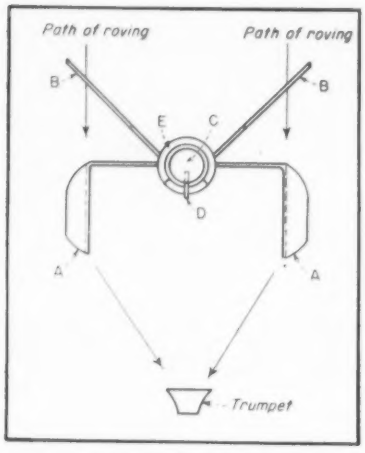


DRAPER CORPORATION

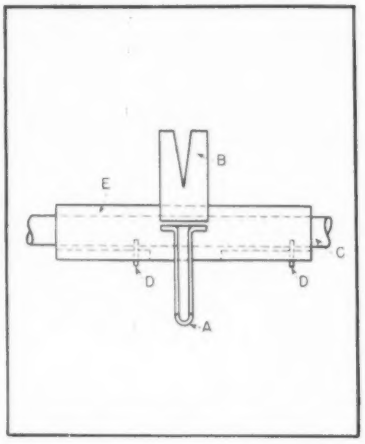
HOPEDALE, MASS.

SPARTANBURG, S.C. ATLANTA, GA.

Device Prevents Singles on Spinning Frames



SINGLING-PREVENTER DEVICE is attached to the stationary rod that runs the length of the frame. Arrows show the path of roving to the trumpet.



THE V is a cutting surface that breaks a single roving after its companion breaks. An inward pull from arms *A* causes the single roving to break.

A singling preventer for spinning frames on coarse counts and nub yarns has been developed by James C. Faulkner, Box 3411, Fayetteville, N. C. The device is also suitable for finer counts if the size of the traveler is reduced.

Fig. 1 is a side view of the mechanism showing the path of the roving (arrows) down to the trumpet. Fig. 2 is a side view showing the cutting surface V.

The one-piece mechanism is mounted on the stationary rod *C*, which runs the length of the spinning frame. The two ends of roving are fed through the V of the arms *B*. They ride in the grooved lips of arms A and then on to the trumpet.

The mechanism is in balance with the lips of arms A in a vertical position; as long as both ends of roving continue to run, the arms will remain in this position. But when one end of roving breaks, the inward pull of the other end going to the trumpet rotates the mechanism 45°, where it stops because the side of tube *E* comes in contact with pins *D*, which are inserted in the stationary rod.

After rotation, arms *B* are in a horizontal position. The roving in the V is pushed outward, and it slips down into the V. Its forward movement is impeded enough so the roving is broken. A singling is thus prevented by this action.

Circle T-20 on Reader Service Card

Wool-Spinning Spindle for Use With Paper Tubes

NEW WOOL-FRAME SPINDLE for paper tubes can be plumbed while it is running.

A new spindle for spinning wool on paper tubes has been brought out by Hartford Machine Screw Co., Hartford, Conn.

This new Hartford spindle is built with two prepacked, grease-retaining ball bearings, and no relubrication should be required for an estimated five years. Spring clutch pads at the top of the blade give the spindle a positive drive. Designed for snap-in replacement, the clutch pads adjust themselves to variations in the inside diameter of the paper tube.

The spindle can be plumbed while running. A knurled adjustment knob controls double-aligning sleeves, which hold the blade plumb and assure a more-even yarn twist.

Paper tubes are said to drastically reduce bobbin cost and inventory. They require less time for doffing and piecing up and have a larger yarn capacity. Doffing is easier because the operator just inserts his fingers in the top of the tube.

Circle T-21 on Reader Service Card

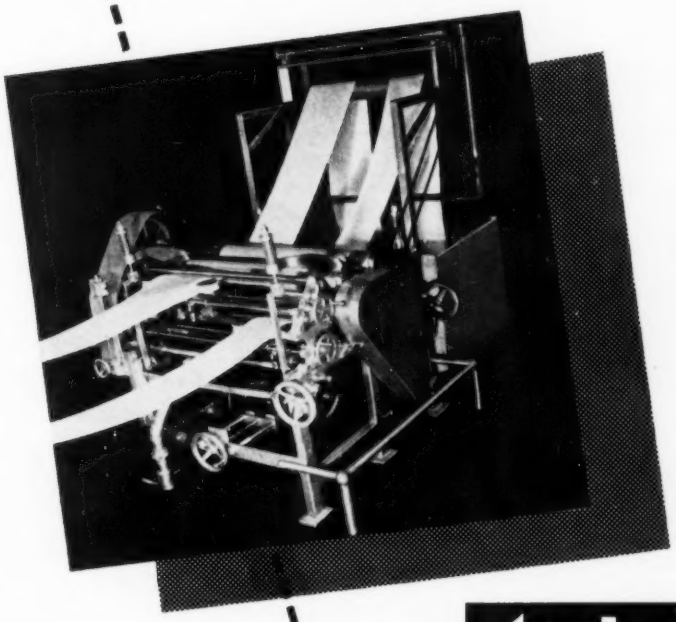
Abrasion Tester Converted to Pilling Tester

PILLING TESTER is made by nonpermanent changes to the standard U. S. Testing abrasion tester.

A pilling-test attachment that fits onto U. S. Testing's abrasion tester has been developed by U. S. Testing Co., Inc., 1415 Park Ave., Hoboken, N. J. Only temporary modifications have to be made to the abrasion-testing equipment.

An offset rotary table is fitted on the lower reciprocating table of the abra-

5 MACHINES IN 1 FOR CIRCULAR KNIT FABRICS



tube-tex EXTRACTOR PAD

There's no other machine like the patented TUBE-TEX Extractor Pad ● At high speed, it will continuously wet spread, straighten cross line, extract, chemically process and flat fold ● Result—you save time, floor space and up to 80% of all chemicals usually lost in other methods with ordinary machines ● What's more, the TUBE-TEX Extractor Pad cuts maintenance costs and eliminates fabric waste.

And best of all, you'll get the best out of your fabric with the TUBE-TEX Extractor Pad superior chemical finishing . . . non-curl, softeners, resins, fillers.

For greater sales, TUBE-TEX your fabric with the TUBE-TEX Extractor Pad.

TUBE-TEX is fully covered by patents issued and pending. All patents controlled by:

tubular textile machinery corporation

33-61 54th STREET, WOODSIDE, NEW YORK

Licensed agents and manufacturers: H. W. Butterworth & Sons Co., Bethayres, Pennsylvania.

sion tester, and the upper table is replaced with an arm that has a small disk with a flat surface. This flat surface rests on the rotary table.

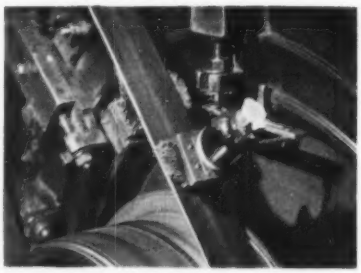
The disk and table are covered with pieces of test fabric; and the action, which combines a rotary action with mild abrasion, starts.

The lower unit reciprocates: on one leg, each surface has a circular motion; on the other leg, there is no rotary action. So the action combines pure abrasion and circular abrasion.

Tests are said to correlate closely with wear results.

Circle T-22 on Reader Service Card

Device Keeps Card Belts Clean and Dressed



THE TOP BRUSH on this device applies a preservative oil to the card belt. Another brush on the back cuts down belt slippage.

A device for keeping card-drive belts cleaned and dressed has been patented by and is available from W. C. Waters, 1 Frazier Dr., Columbus, Ga. The device is attached to the card frame. Two brushes, one of which applies a preserving oil, keep the belt in good condition. The bottle of preservative oil has to be refilled about every 10 days (every four days for the first two weeks).

Before the device was patented, it was being used in one mill. This mill has belts that have been in use over five years. Before the device was installed, belts would last 6 to 12 months. Revolutions-per-minute loss from belt slippage was cut from 40 to 4.

Circle T-23 on Reader Service Card

NEW *Dyes* AND *Chemicals*

Two New Detergents Available

Two new synthetic detergents, Energetic and Energetic S, are available from Armour & Co., Chicago, Ill. Energetic, a nonionic detergent, has maximum detergency, high soil-removing and soil-suspending properties, excellent emulsifying action, good wetting properties and surface-tension-lowering ability, and excellent stability to textile chemicals, the makers claim. Energetic is concentrated and powerful; so quantities required will be low. The other, Energetic S, is designed for use in the presence of petroleum and aromatic solvents. The solvents are used to loosen grease, stains, and dirt from the cloth; and Energetic S is said to remove both solvent and dirt from the fibers, preventing redisposition of them on the cloth.

Circle D-1 on Reader Service Card

New Fungicide for Vinyls Is Nonirritating, Colorless

An improved fungicide specifically developed for use in vinyl coatings has been put on the market by Nuodex Products Co., Inc., Elizabeth, N. J. The product, Nuodex 100 VT, is nonirritating and nonsensitizing to the skin, the makers claim. It is stabilized so that heat encountered during normal milling and curing operations won't cause discoloration. The product comes in liquid form and is easily incorporated in vinyl coating compositions, where it is compatible with all commercial resin-plasticizer-stabilizer combinations. Purpose of the fungicide is to stop bacteria and fungi from attacking the organic plasticizers, which are formulated with the coatings to make the finished product soft and pliable.

Circle D-2 on Reader Service Card

Two New Dyes for Dacron Have All-Round Fastness

For dyeing full, deep navies and blacks on Dacron staple, Interchemical Corp., Textile Colors Div., Hawthorne, N. J., recently introduced two new dyes, Interchem Direct Acetate Navy Blue NVYS and Interchem Direct Acetate Black NCS. Shades produced with these two new dyes are claimed to possess good all-round fastness properties. Dyeing can be carried out in a neutral, acid, or alkaline dyebath. These new dyes are suitable for dyeing Dacron staple in the form of raw stock, yarn, woven fabrics, knit goods, and hosiery. The procedure for dyeing calls for phenyl methyl carbinol, benzoic acid, or other suitable carrier. When applied to Dacron staple, these two new dyes exhaust well, have excellent build-up, and are level dyeing.

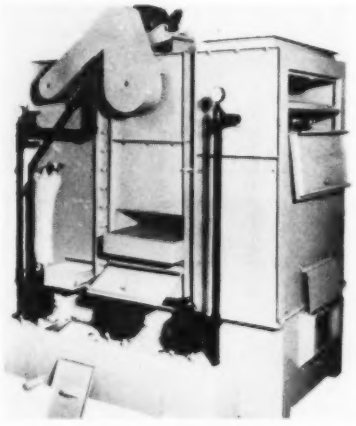
Circle D-3 on Reader Service Card

Weighting Finishes Are Stable to Heat, Boiling, Salt

Two weighting and filling agents that are claimed to be resistant to high temperature, prolonged or repeated boiling, and large salt concentrations, Tylose MGC 25 and MGC 600 are being distributed by The Henneux Co., 45 Columbus Ave., New York 23, N. Y. The products are being made in U. S.-administered Germany by Kalle & Co., Weisbaden.

Circle D-4 on Reader Service Card

Air-Conditioning Machine Controls Humidity With Thermostat



THIS AIR-CONDITIONING MACHINE uses a water-absorbing liquid to fix the relative humidity and temperature of the air.

A new air-conditioning machine that is said to give complete control over the relative humidity and temperature of air is being produced by Niagara Blower Co., 405 Lexington Ave., New York 17, N. Y. In the new model, filtered air is treated with a moisture-absorbing liquid, Hygrol, to fix the relative humidity and the temperature.

With this method of air conditioning, no moisture-sensitive instruments are required, and exact control is possible with thermostatic control. The

(Continued on page 254)

BECCO® BRIEFS

PERACETIC ACID BLEACHING

. . . of acetate rayon, nylon or mixtures of these, with or without cotton or viscose rayon, produces full white without fiber attack and permits full mote removal when bleaching cotton mixtures. Dye becks, jigs and similar equipment are used. Write for completely informative Becco Bulletin No. 44 or consult with Becco representative.

Buffalo Electro-Chemical Company, Inc.

DIVISION OF FOOD MACHINERY AND CHEMICAL CORPORATION

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THIS IS NO. 101 OF A SERIES ON

GETTING THE MOST FROM TWISTING

Information about twisting designed to show improvements in twisting equipment and new ideas in the twisting operation

IMPROVING THE MODEL 10 RING TWISTER

Four New Attachments Add Even Greater Efficiency

FEED ROLL ASSEMBLY

A Gear Alignment Stud (A) has been added to guide the starting lever into the exact position for most accurate alignment of the gears while they are being started. It also steadies the lever, thus maintaining the alignment while the gears are meshed. As a result, it reduces wear and noise, yet allows the lever to be moved easily when starting.

Each Intermediate Feed Roll Gear (B and C) and its hub is now made from a single piece of steel. A straight oil-impregnated bushing is pressed into it. Formerly the bushing formed the gear hub. Combining the gear and hub into one solid piece permits the gear to be attached more firmly to the gear stud.

A retaining ring near the end of the stud permits quick and easy removal of these gears.

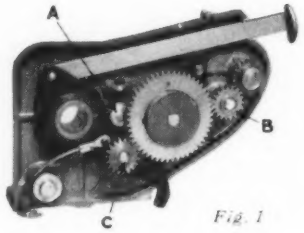

Fig. 1

NEW DROP WIRES AND DROP WIRE FEET

For plying up to four ends, Drop Wire Feet made of steel stampings are used. New Drop Wires that can quickly be slipped into channels in the feet are used with them.

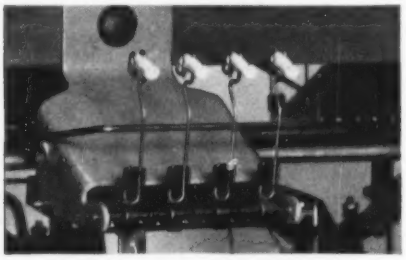
Fig. 2

TRIP WIRE ADJUSTMENT

If a Feed Roll fails to knock off, probably the trip wire isn't seated far enough into the Feed Roll Housing. A very simple adjustment corrects this condition. All that is necessary is to loosen the hex nut that locks the trip wire in position and turn the trip wire in the connector until it is seated deeply enough to knock off the Feed Roll when it is activated. Be sure to tighten the hex nut again.

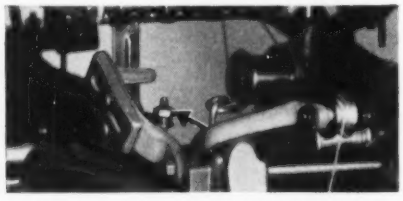
Fig. 3

KNOCK-OFF THROW OUT

A new Knock-Off Throw Out mechanism that is more accurate and easier to adjust than the former type is now being used.

At each Stop Motion Assembly a collar with a lip that contacts the knock-off lever is now utilized on the Knock-Off Throw Out Rod. These collars can be adjusted individually to compensate for any variation between the relative position of the Knock-Off Lever in each stop motion assembly and the Knock-Off Throw Out Rod.

The mechanism itself is operated manually. When the operator wishes to inactivate all the stop motions — as for example when starting up again after the twister has been shut down in the middle of a doff — she pulls the Knock-Off Throw Out Lever toward her. The lever is located next to the end stand at the twist end of the machine. Once the twister has started up the lever should be pushed back to an upright position; otherwise the stop motions won't work when a runout or end break occurs.

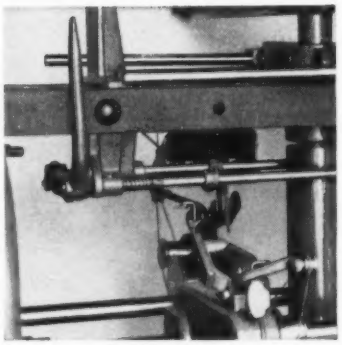
Fig. 4

November 1953 — 23.3.4

WINDING AND TWISTING MACHINERY FOR NATURAL AND SYNTHETIC YARNS

UNIVERSAL WINDING COMPANY

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LETTERS FROM OUR READERS

Address all communications to:
Editor, *Round Table*, TEXTILE WORLD
330 West 42nd Street, New York 36, N. Y.

COULD OUR TRAVELERS BE IMPROVED?

Dear Editor:

We are surprised at the short life of travelers in the U. S., as outlined in your Georgia TOE report [TW, July, '53, p. 106].

As you can see from the following data, our traveler life is five to ten times longer than that noted in your report.

Our frames are Saco-Lowell and have the original rings, now 13 years old. Gauge is 3¼ ins., flange is double, and the travelers we use are of English make.

On 8s yarn, 2¼-in. ring, we run travelers for 1,275 hrs. at a maximum speed of 3,400 ft. per min. Spindle speed is 5,776 rpm., and the traveler is a No. 12.

On 12s yarn, 2¼-in. ring, travelers last 762 hrs. at 4,500 ft. per min. Spindle speed is 7,650 rpm., and the traveler is No. 7.

On 18s yarn, 2⅛-in. ring, travelers last 508 hrs. at 4,600 ft. per min. Spindle speed is 8,310 rpm., and the traveler is No. 2.

On 24s yarn, 2-in. ring, traveler life is 508 hrs. at 4,570 ft. per min. Spindle speed is 8,725 rpm., and the traveler is No. 3/0.

How can you explain these differences?

G. VAN DUISSE
S. A. Union Cotonniere
Gand, Belgium

Reader comment is invited on this question.—EDITOR.

—OR, PERHAPS, OUR MATHEMATICS!

Dear Editor:

The table on traveler life that appeared on p. 106 of your July issue as a part of the Georgia TOE report contains several maximum traveler speeds that appear to be too high.

At the maximum bobbin diameter, traveler speed corresponds very closely to this formula:

$$\text{Traveler speed (ft. per min.)} = \frac{\text{Spindle speed (rpm.)} \times \text{ring dia. (ins.)}}{4}$$

Front-roll speed and traveler lag are factors to be considered, but this formula gives fairly close answers.

A more accurate appraisal of traveler speeds would have been possible if the mills had also given their twist multipliers.

S. H. HELLAND
Whitinsville, Mass.

HAPPY SOUTHERN MILLS NEED NOT FEAR NEW INDUSTRY

Dear Editor:

A recent newspaper article described a meeting called by the Chamber of Commerce of a one-mill Southern town, where the chamber's industrial committee said it was blocked by the mill in its efforts to secure new industry for the area.

It would seem that the mill officials have much to learn about public relations, and it is hard to see how they could have allowed themselves to be put in the position of opposing the entry of another plant into the town.

There does not seem to be any direct competition between the mill and the proposed new industry except for labor. A company cannot continually fend off competitors for labor by keeping them out of the area but should plan its activities in such a way as to be able to hold its labor in an open free-labor market. Any other method is not in the best interests of the community.

The South has gone a long way toward increasing industrialization, even though much of it has been done haphazardly. The attitude of such mills is not going to induce other industries to settle in the South.

The textile industry is blessed with some

TEXTILE TICKLES . . . . . *By Edgar Allen, Jr.*

"Sometimes I think we should transfer Sneedle away from the polyvinyl alcohol!"

of the most progressive leaders of American industry, and I personally know that some of this mill's officials fall into this class. The textile industry also has some of the most hidebound "little" leaders in the country. It is difficult to see how both kinds could exist in the same organizaion.

A READER

HERE'S A NEW SAFETY KITTY IDEA

This item from the "Sonoco News" impressed us as an idea worth more publicity. Perhaps you can use it in your mill.—EDITOR.

Sonoco employees now have $2,000 in the safety kitty. An additional thousand dollars was deposited in the safety kitty recently because a quarter of a million manhours without a disabling injury had been completed.

In this safety contest, cash in the amount of $1,000 is deposited in the safety contest kitty whenever Sonoco employees complete 250,000 manhours without a disabling injury. This money, however, will not be available for distribution as prizes until such time as 1,000,000 manhours without a disabling injury is completed. The contest started in February and will run for a period of one year; therefore, it will be possible to accumulate one million manhours without a disabling injury so that the total amount of prize money can be distributed.

AN OMISSION

Dear Editor:

I was pleased to see the excellent treatment you gave to Harry Smolens's article on the use of hydrogen peroxide in your September issue.

However, . . . we were disappointed that his company affiliation did not appear . . . as he has recently joined our company and is well known in the field.

CLEVELAND LANE
Manager of Public Relations

Pennsylvania Salt Mfg. Co.
Philadelphia, Pa.

We regret that the firm name was omitted from Mr. Smolens's by-line and are glad to set the record straight.—EDITOR.

Back to School

A 20-lesson program has been initiated at Square D Co., Milwaukee, Wis., to improve the reading efficiency of 60 executives and supervisory employees.

A pair of machines are used to exercise the eyes and brains of the student, to stimulate him to recognize and grasp information from the page at an ever-increasing rate.

The Foundation for Better Reading is conducting the course.

Questions AND Answers

Cotton Jersey and Muslin Used for Meat Coverings

Technical Editor:

What are the fabric specifications for bags used by the meat-packing industry? (9699)

Meat carcasses are bagged with an unbleached cotton-stockinette tubing knitted to the following specification:

Yarn No.	— Not coarser than 16s singles
Cylinder	— Not less than 11 ins.
Cut	— Not less than 11 ins.
Needles	— Not less than 425
Stretch	— Not more than 46 ins.

An unbleached muslin having a weight of 5.50 yds. per lb. in 28½-in. width can also be used. The count of this fabric usually runs approximately 42 ends and 42 picks of 21s singles yarn.

Another unbleached muslin used has a weight of 3.75 yds. per lb., based on 40-in. width. The count of this material is 48 ends of about 18s warp and 44 picks of about 7s filling.

Two grades of osnaburg cloth, "clean" and "part-waste," are also used. These grades weigh 3.64 yds. per lb., based on a 40-in. width; and the counts are about 32 ends of 12s warp and 28 ends of 8s filling.

Plastic Yarn Warping Improved With V Creel

Technical Editor:

We are putting 92 spools of No. 20 plastic yarn on pin boards by the old silk method of warping on a horizontal warper to get a total warp of 644 ends.

The spools weigh about 3 lbs.; and in turning on a rigid spindle, they create too much drag. On a revolving spindle, not enough drag is applied. When the warper is stopped, throw-offs of filament from spools and backlashing occur.

Can you suggest any other method to do the job more satisfactorily? (9692)

Warping plastic filaments by the old silk method is a slow, costly process; and possibilities of defective cloth and slow weaving may be caused by this warping method. In putting up a large bank, the warper creel could be crushed by the pressure exerted by the yarn. As the length of the warp increases, pressure increases, whether the spools revolve or the yarn runs off over the end.

Two methods may be used to warp plastic filament successfully.

One method is to run directly from the creel to a beam, with ends placed over the full width of the beam, as in the cotton system. After the full number of beams have been wound, the beams are run off onto the loom beam. Since you run 92 ends at a time, seven beams would be required for the 644 count. Running the yarn through a sizing machine without size, heat, etc. but with stretch control retained eliminates loose ends and avoids making a soft warp.

The second, and perhaps the best, method is to build a full 644-end V-shape creel and secure it at the back of the sizer so that the yarn will run over the drums and directly to the loom beam.

This method builds excellent beams at low warping costs. Although the yarn speed is slower than in the other method, no backlashing occurs and only one run is required where seven runs are required for the other system.

Using an old-type cotton V creel, on which the yarn pulls off a package mounted on a ⅜-in. spindle running on porcelain steps, would also help to overcome backlashing.

Heavy Padding Is Knitted on Two-Bar Raschel Machines

Technical Editor:

What type of machine was used to make the enclosed sample of heavy padding? (9696)

A 10-gauge (five needles per inch) two-needle-bar raschel machine with a laying-in attachment was used to knit the sample. The heavy sliver filling made from waste cotton is locked in place with a two-fold cotton yarn.

In this type of knitting, the warp yarns are located in a creel in front of the machine and run over the operator's head to the needles. Only one guide bar is used to make a pillar stitch (2-0, 2-4).

The method of knitting is as follows:

1. The back needle bar is lifted to its high position, and the guide bar makes it 2-0 lap around the needle hooks.

2. The filling attachment runs across a plate in front of the needle bars. A chute insures the correct positioning behind the back needles,

but some machines employ a fork to push the filling into place.

3. The front needle bar rises, trapping the filling between the needle bars.

4. The back needle bar descends and pulls the new loop down. The old loop on the needle stem closes the latches and is cast off.

5. The guide bars swing over the front-bar needle hooks.

6. The front needle bar drops and the new stitch is formed.

By swinging the guides from the back needles to the front and back again and shogging the guides to the next needle on the opposing bed, the filling is locked firmly in position and the fabric has excellent stability.

Working Speed Is Best For Card Grinding

Technical Editor:

Our stock is 1⅛-in. Middling cotton. We grind with a cylinder speed of 180 rpm., a grinder speed of 725 rpm., and a traverse of 40 secs. per cycle. The doffer speed is 8 rpm., and grinder speed is 650 rpm., with a traverse of 45 secs. per cycle. Both grinders are on for 7½ hrs., and we get around to all the cards every 20 days. Would you consider these conditions ideal? (9693)

One of the best recognized authorities on card grinding states: "The speed of cylinders and doffers while grinding has been a controversial subject. Excellent results have been obtained by running the cylinder at working speed.

"Recommended speed for 50-in. cylinders is 160 to 170 rpm. and doffers about 340 rpm. Grinders 7 ins. in diameter are run 650 to 750 rpm. Frequent grinding with a light setting is advisable. The roll should be set to give an audible hiss without a spark."

Actual reports from mills show traverse cycles varying from 0.58 to 0.75 min. per cycle. The frequency of grinding is recommended as every 20 to 30 shifts.

Prespinning Treatments Determine Spun-Silk Type

Technical Editor:

How is silk waste treated prior to spinning? (9694)

"Discharged" spun silk and schappe spun silk are derived from silk waste obtained from the following sources: the uneven filaments from the inside layers of the cocoon, the coarse outside layers of the cocoon, pierced or damaged cocoons, reeling waste, gum waste, and manufacturer's waste.

Spun or waste silk is a tangled mass of fibers, broken cocoons, twigs, sticks, worms, and chrysalises. There are two methods of separating fiber from these foreign substances, and each method produces a different spun silk. The sericin or gum is also removed in the process.

Discharged spun silk is produced in the following manner: The fibrous mass is put in open-mesh cotton bags, which are placed in large tubs, covered with soapy water, and boiled for about 2 hrs. They are then put through a hydroextractor. A second soapy boiling of about 1½ hrs. is given. The fibers are again hydroextracted and dried. This method is used in the United States. It produces fibers with clear brilliance.

To produce schappe spun silk, the fibrous mass is placed in a large vessel and covered with hot water; then the tank is sealed. After a few hours, the gum ferments and loosens. The fibers are then soaked for a few hours in vats of hot water, after which they are washed, hydroextracted, and dried. The fermentation causes a most offensive odor. This method is used in Europe. It produces a fiber with a clear, level color, less lustrous than those cleaned by the discharging method. This fiber is suitable for making velvet.

After degumming, the silk waste is taken to a cocoon beater if it contains many worms or chrysalises. The silk, on a revolving disk, is beaten by a leather whip, which loosens and knocks out the foreign substances. Still a tangled mass, freed from all foreign substances and gum, the fibers are ready to be spun into yarns.

Coarse Yarns Require Faster Ring-Rail Movement

Technical Editor:

Is it necessary to have a definite ratio of speed of ring-rail movement to cylinder speed for different yarn numbers? (9695)

The yarn number being spun determines the speed of the ring rail in relation to the number of inches being delivered by the front roll. The diameter of the yarn increases as the yarn becomes coarser, and it is necessary to increase the speed of the rail to lay the yarn in proper position on the bobbin.

The lay change gear controls the movement of the rail. This gear is changed if there is a large change in the yarn number. A small change usually does not require a change in lay gear.

There is no fixed ratio between cylinder speed and the speed of the rail traverse. The relative speeds of these two parts vary when the number of teeth in the lay gear is changed.

This formula may be used in calculating the lay gear when new yarn numbers are to be run:

$$\sqrt{\text{new yarn No.}} : \sqrt{\text{present yarn No.}} :: \text{present gear} : \text{gear required}$$

As shown by the formula, the speed of the rail and the number of teeth in the lay gear are inversely proportional to the square root of the yarn number. The speed of the rail may be calculated from the length in inches delivered by the front roll, the coils per inch required on the bobbin, and the bobbin diameter.

Formula Finds Average Yarn Number in Cloth

Technical Editor:

How can we find the average numbers of yarn in a cloth? (9697)

The following formula will give the average cotton yarn number in a cloth:

$$\frac{24\ (E + P)}{35\ W}$$

Where E = ends per inch
P = picks per inch
W = ounces per square yard

This formula is not too accurate, since it does not take into account the yarn crimp, but it is suitable for commercial requirements.

Here is how the formula is developed:

1. Ends per inch × inches per yard = yards of warp yarn in 1 sq. yd. of fabric.

2. Picks per inch × inches per yard = yards of filling yarn in 1 sq. yd. of fabric.

3. (ends per inch) + (picks per inch) × 36 = approximate yards of yarn in 1 sq. yd. of fabric.

Cotton yarn number = number of 840-yd. lengths of yarn in 1 lb.

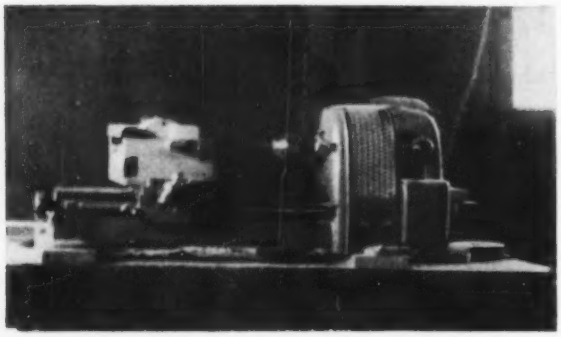
$$= \frac{\text{yards of yarn} \times 16}{\text{weight in ounces} \times 840}$$

$$= \frac{(E + P) \times 36 \times 16}{W \times 840}$$

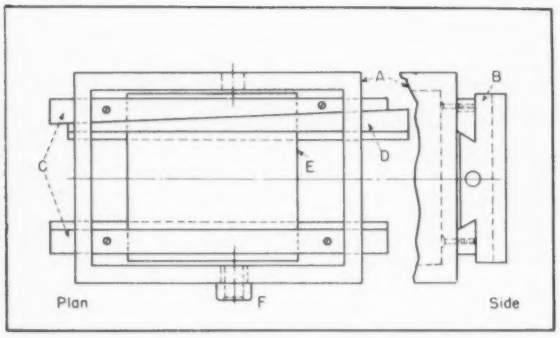
$$= \frac{24\ (E + P)}{35\ W}$$

Kinks AND SHORT-CUTS

Jig Holds Dobby Drums for Accurate Lathe Drilling



DOBBY DRUM is supported on an arbor in the box jig to locate the drum while holes are drilled. Box jig is firmly held on the tool carriage of the lathe.



BOX JIG is fixed to metal strips. One strip is cut to form a key to lock the jig to the carriage. *A* is the box jig, *B* the carriage, *C* the metal strips, *D* the key, and *E* the outline of the work.

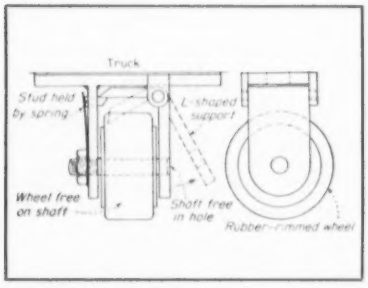
I made myself a box jig to hold dobby drums and other cylindrical work for accurate drilling on an engine lathe.

I removed the tool-post slide from the lathe and replaced it with the jig. The jig is a metal box screwed to two beveled strips. A section of one of the strips is sawed off at a slight angle to make a key. The key may be placed so that it can be driven in from either side of the lathe.

The center of the bushing is located on the center line of the lathe spindle. When the jig is in position, it is firmly held by driving in the key.

A dobby drum is drilled by supporting the drum on an arbor in the box and holding the drum with blocks and a thumbscrew at the back end of the box jig. Where there are 12 rows of holes in the drum with four holes in each row $\frac{7}{8}$ in. apart, a 12-tooth gear is fixed to the end of the drum to furnish the correct position of the rows around the circumference. The drum is moved along the arbor and held by $\frac{7}{8}$-in. blocks to secure the horizontal rows of holes. *W. A. Simond, Essex Junction, Vt.*

Homemade Casters Cleaned in a Minute



L-SHAPED SUPPORT swings free and allows easy cleaning of this homemade caster.

We used to have a lot of trouble keeping casters clean, and replacement costs were high because the casters were run while full of dirt.

So we designed our own casters with a simple arrangement for cleaning that eliminates the need of even a wrench.

A standard rubber-rimmed solid wheel is the starting point. Two pieces of flat steel support the shaft that the wheel runs in. One piece of steel is straight and is welded to the under side of the truck on a piece of steel bolted to the truck. The other piece of steel is L-shaped and is welded to a steel rod that is supported just below the truck bottom.

The idea is that the L-shaped piece can swing away and leave the wheel free to be removed and cleaned.

To hold the L-shaped piece in place, we drill another hole in the straight piece and put a little stud through it. The stud is held in place by a piece of bale tie or strip steel.

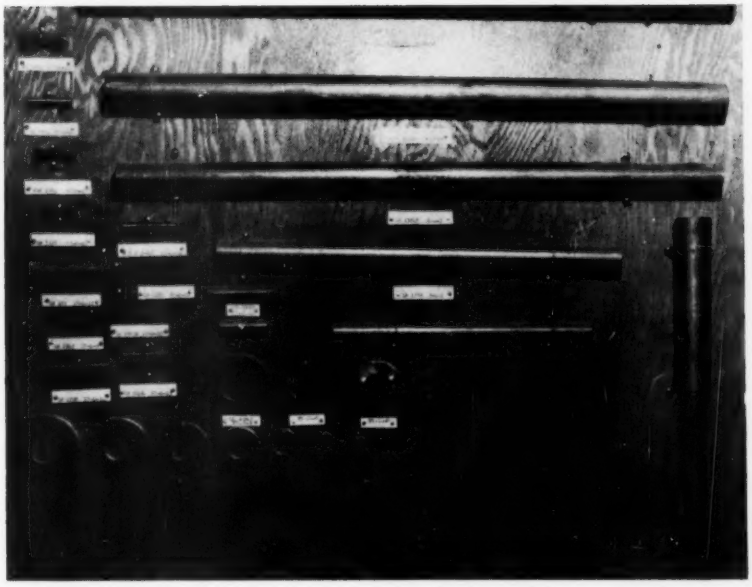
To clean a wheel, we just hold the stud out, swing away the L-shaped support, and remove the wheel.

The surfaces of the rod and the L-shaped piece are beveled where they meet; so the support clicks back in place after the wheel is cleaned.

Caster life is longer now, because cleaning is so much easier. *A. de Swann, Israel.*

Kinks and Short-Cuts

Tag Bins With Parts To Speed Supply Service



SAMPLES OF PARTS are arranged at the end of each bin, and the compartment number is written under each part.

Assorted parts are always hard to find in supply bins because most of these parts are issued only infrequently.

We have a new method that helps us to find these parts quickly.

A sample of each part stored in the bin compartments is screwed to the end of the bin.

All our fixers are required to turn in an old part for each new part issued. We then compare the old part with the new parts fastened to the bin. Since each bin has a bin number and the bin number is also underneath the sample part, we can quickly locate the required part. *Claude High, Inman, S. C.*

Glue Brush Is Renewable

IMPROVISED BRUSH is made from rope held by a nail in a section of tubing. Dirty or hard ends are clipped off, and more rope is then advanced to make a new brush.

We don't use glue very often, but a brush is the best applicator when we do have something to glue. Our trouble was that the brush set solid and had to be boiled before reuse.

Now we make our own brushes with a piece of window-sash cord enclosed in tubing. The business end of the brush protrudes about ½ in. from the tube, where it can be frayed out to form bristles. A small hole is drilled through the tube just back of the tip, and an ordinary small nail holds the cord in position through the hole.

The brush end of the cord gets hard between jobs; and we just pull out the cord, lock it in place again, clip off the hard end, and fray the new end.

The brushes can also be used for varnish and lubricants. *Clifford T. Bower, London, England.*

$500 for Best Kink in 1953

$25 for Best Kink in Each Month

In Addition to Space Payment on Acceptance

You undoubtedly know many Kinks and Short-Cuts that are helpful to mill operators. Write them down and send them in. We pay promptly on acceptance—before publication. In addition, your Kink may win the $500 check for the best Kink of the year or the $25 check for the best Kink of the month; maybe both!

Send in your Kink now. There is always a contest going on. The more good Kinks you send in, the better your chances of winning a prize in addition to earning some easy money for every Kink accepted.

We will polish up your writing and will have an artist make finished drawings. But send in plenty of details so that your Kink can be clearly explained. Be sure your sketch is clear and well labeled, but it need not be a polished job. Best of all, send us a good glossy photograph of it; we will pay you extra if you do and we can use it.

Look over the Kinks in this and other issues. You will get ideas you can use as well as inspiration for Kinks you can send in. We like items that pertain to ways for improving machines, new devices that a mill man can build, attachments or methods of merit—anything that will cut costs, improve quality, or help production.

Your published Kink will be judged impartially by other mill men. In cases of ties, duplicate prizes will be awarded.

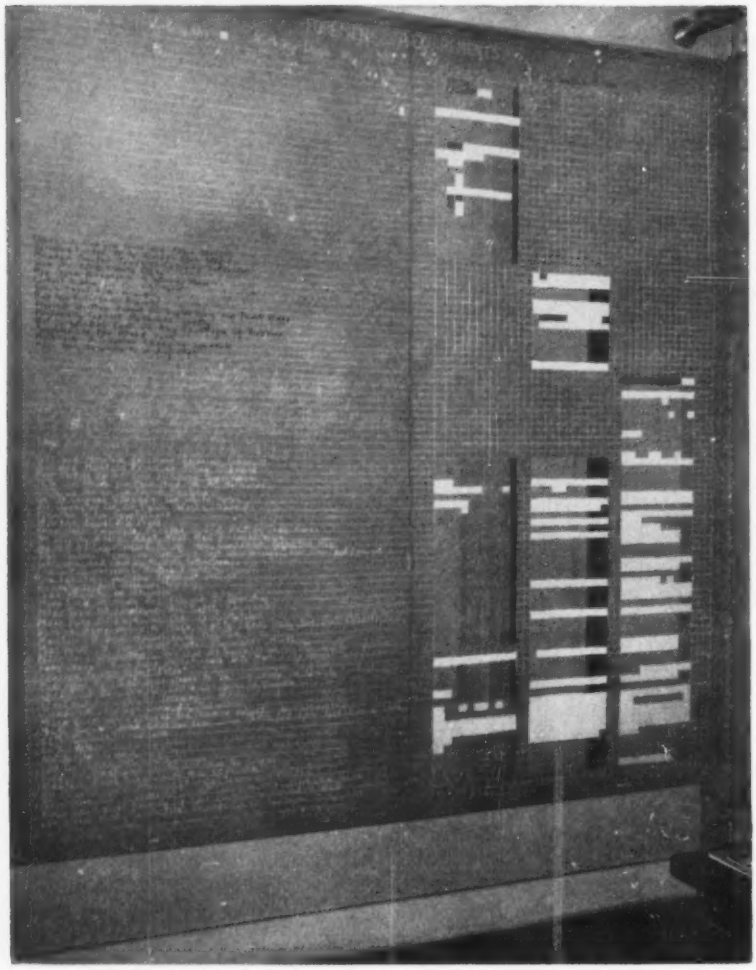
RULES OF CONTEST

1. No limit to number of entries.
2. New $25 prize contest every month, $500 prize contest for the year. Monthly contest confined to Kinks published that month, yearly to those published in calendar year 1953.
3. All Kinks paid for on acceptance; extra payment for photographs. Drawings need not be finished (clear detailed pencil sketches will do).
4. Previously published material not eligible for prizes.
5. Unless you advise to contrary, we assume we may sign your name to Kink when published.
6. Prize winners will be selected by readers, a different group each time. At least 200 will be asked to select preferred Kinks in each issue. Their votes will select the best Kink, and their decision will be final.

Send Kinks to:
KINKS CONTEST, TEXTILE WORLD
201 E. Coffee St., Greenville, S. C.

Kinks and Short-Cuts

Supervisors' Bulletin Board Keeps Record of Progress



THIS BULLETIN BOARD lists the jobs that should be done anyway. The purpose of the board is to encourage supervisors to keep a record of their own progress.

At the beginning of the year, Sycamore Spinning Plant, Sycamore, Ala., lists on a bulletin board in the superintendent's office all the jobs that have to be done during the year. These jobs are things that the supervisors should do anyway; the purpose of the bulletin board is to let the supervisors grade themselves on their progress. At the end of each month, they mark up what jobs they started working on and what jobs they finished; so at the end of the year, the scheduled jobs should be marked off.

Different colors are used to list the jobs for different departments: blue crayon for carding, black for spinning, red for winding, and white for the things everybody is supposed to do.

Another color scheme is used to indicate what is being done about each job. Red means nothing being done, white means the job is being worked on, and blue means the job has been finished. As the year progresses, the colors on the board gradually change from red to white to blue.

Sample jobs listed are:

Carding:

Overhaul, line, and level opening machinery annually.

Scrub steel rolls and buff top rolls on slubbers every three months

Spinning:

Maintain regular traveler-changing schedule.

Overhaul, line, level, and plumb frames annually.

Winding:

Use correct cones for correct yarn.

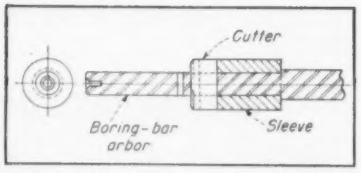
Keep an accurate record of all bad packages.

Everybody:

Post and maintain excellent cleaning schedule.

Maintain equal job loads.

Boring Bar Helps Precision Drilling



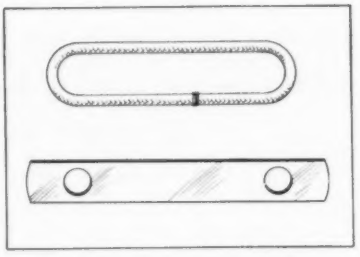
BORING BAR for an engine lathe makes bushing drilling more accurate.

I was able to do a more accurate job in boring for bushings on my engine lathe by making a boring bar. This bar can also be used on milling machines with equal success.

I made the sleeve a good slip fit for the arbor and milled the slot for the cutter before placing it on the arbor. The arbor was cross drilled and slotted to match the slot in the sleeve. The cutter can be locked with a set-screw, but a light drive fit is sufficient to hold it if the cutter length is the diameter of the sleeve.

Boring from the inside of a box jig leaves the hole in the jig smooth on the inside. If the wall crumbles a little where the cutter breaks through, the fault is covered by the head of the bushing when the bushing is inserted. *Walter A. Simond, Essex Junction, Vt.*

Plate Replaces String In Skein Reeling



STRING LOOPS (top) were not rigid enough to wind heavy yarn on swifts. Metal plate (below) supports the yarn much better and gives better reeling.

When we make skeins of heavy yarn, the string connecting the arms of the swift often gave way. The reeling was then snarled up and looked very uneven.

To overcome this problem I made a small plate of light metal and drilled two holes to fit tightly over the arms of the swift. The plate supports the yarn much better than the string, and we now get better winding.

NOW— NEMA Type XII

THE ONLY SAFETY SWITCH IN SPECIAL INDUSTRY ENCLOSURE!

CAPTIVE SCREWS assure tight cover fit
EXTERNAL MOUNTING FEET eliminate need for conventional leaky mounting holes within the enclosure
NEOPRENE GASKET provides positive cover seal
WELDED TIGHT ENCLOSURE without knockouts excludes dirt, dust, oil, and splashing coolant

This new heavy duty switch, built to NEMA XII specifications, is "tailor-made" for applications requiring the exclusion of dirt, dust, oil and coolant.

The rugged, visible-blade switch mechanism within the special industry enclosure has all the performance features that have made Square D an overwhelming "first choice" for fifty years.

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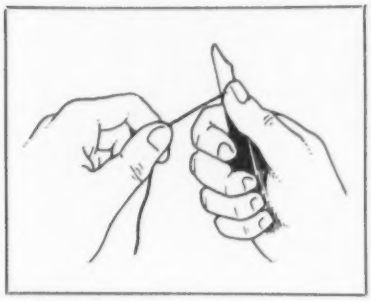
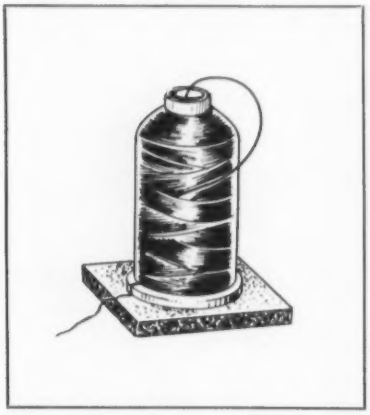
1903 • **50** YEARS OF DESIGN LEADERSHIP • 1953

Kinks and Short-Cuts

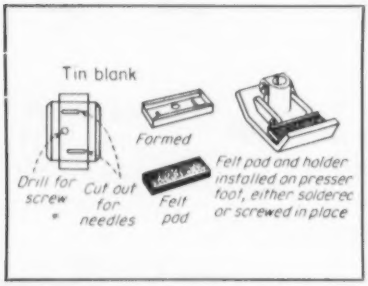
Here Are Three Ideas For Your Sewing Room



CUTTING NYLON THREAD. To cut nylon thread and prevent fraying, put your thumb over the thread and hold it firmly against the knife blade. Pull the thread quickly down against the blade with your other hand, and you'll have a nicely pointed end.

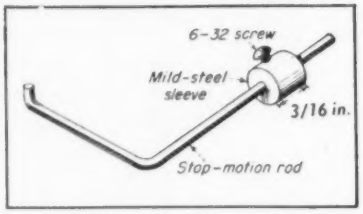


LUBRICATING THREAD. If you have to moisten or lubricate thread, pass the free end through the tube from top to bottom. Put the tube on a felt pad saturated with water or thread lubricant, and draw the thread off at right angles to the base of the tube.


Tin blank
Drill for screw
Cut out for needles
Formed
Felt pad
Felt pad and holder installed on presser foot, either soldered or screwed in place

NEEDLE COOLER. You can make your own needle cooler this way. Fasten a small holder containing a felt pad to the presser foot. Keep it moist by the drip from an oil cup mounted above the needle and filled with thread lubricant or water containing a rust inhibitor. *Robinson Thread Co., Worcester, Mass.*

Winder Stoppages Reduced With Adjustable Weight



ADJUSTABLE SLEEVE fitted to winder stop-motion rod provides an easy adjustment when yarn numbers are changed.

We experienced frequent stoppages on our Model 102 Foster winders when we changed from a heavy yarn to a fine yarn. The excessive stoppages were caused by play in the stop-motion rods.

The rod could be adjusted by altering the waxing attachment, but this process took a lot of time. Since we wind as many as five yarn numbers (8s to 20s) during one shift, we figured out an easier way to adjust the tension.

We cut a hollow mild-steel rod into sections $\frac{3}{4}$-in. long. The internal diameter of the cylinder allowed a slip fit on the winder stop-motion rod. A 6-32 hole was drilled and tapped in the cylinder, and the cylinder was slid onto the stop-motion rod to act as an adjustable weight.

We now apply less pressure on fine yarns and more on heavier yarns by simply loosening the lockscrew and moving the weight backward and forward. *Dan Singer, New York, N. Y.*

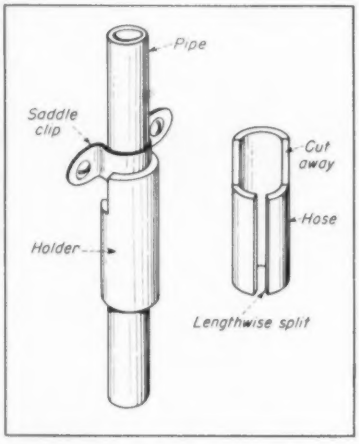
Holder for Pipe Clips Serves as "Third Hand"

We frequently have to put up small piping or tubing on the wall to carry compressed air, cables, or lubricating oil. Saddle-type clips hold the tubing to the wall.

Putting the clips in place used to require a third hand until we devised a holder.

A short length of sturdy rubber hose is split lengthwise, and half its circumference is cut away for a short distance at one end. The split allows the hose to be slipped over the pipe, and the cutaway portion holds the pipe clip in place.

One piece of hose fits a wide range of pipe sizes. *Clifford T. Bower, London, England*



RUBBER-HOSE SECTION fits on pipe, and the cutaway portion holds a saddle clip while holes for the clip are drilled.

Best-Kink Award for September

Each month TEXTILE WORLD awards $25 to the submitter of the Kink judged by a panel of over 200 practical mill men as the best for that particular month. A new batch of Kinks appears each month, and a new group of readers acts as judges each month.

If you are asked to judge one of these days, be sure to help select the best Kink by sending back your answer in time for final tabulation. Closing date for judging is the last day of the month in which the Kink appears.

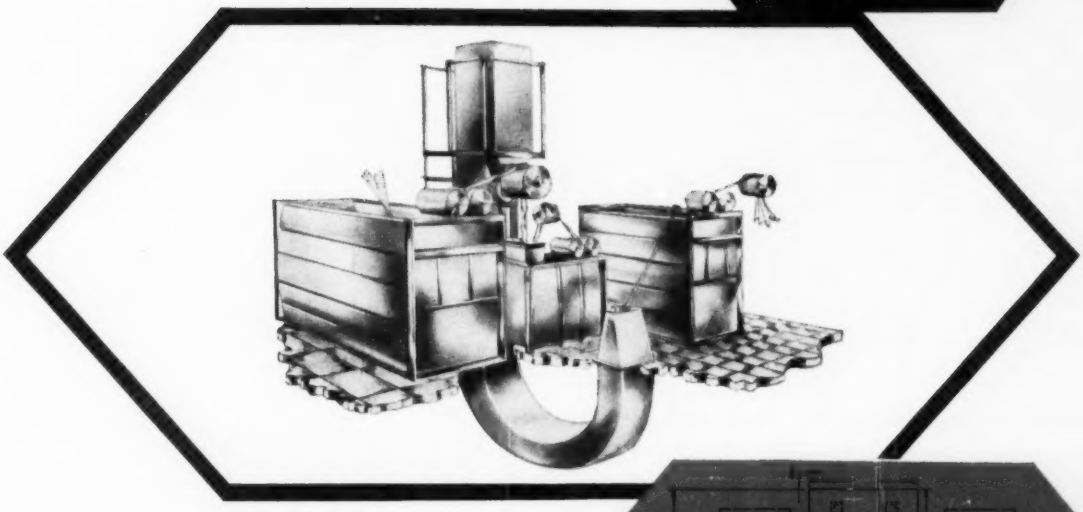
The September contest resulted in a tie. The best Kinks for September, according to TEXTILE WORLD reader-judges, were:

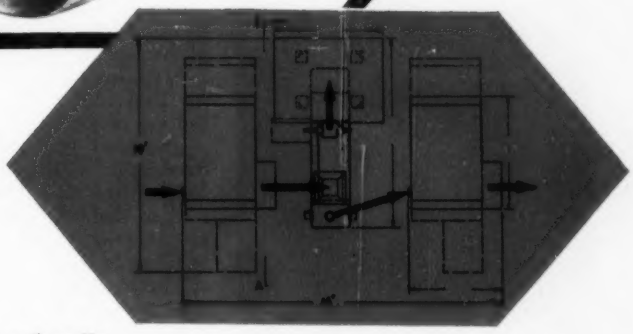
"Use a Color System To Identify Machine Parts"
By Dan Singer, New York, N. Y.
and
"Use a Support To Straighten Warped Brake Bands"
By C. M. Lee, Dublin, Ga.

Each of the winners is being sent a check for $25 with the compliments of TEXTILE WORLD.

Quality from the Mill . . .
Profit from the Machine!

The NEW Rodney Hunt Bleaching RANGETTE





New profits for both large and small textile mills are possible with this efficient and economical new unit.

You get big-range efficiency in the small mill . . . normal efficiency in the big mill where there are special-lot problems.

Write for NEW Catalog

Light or heavy fabrics can be handled continuously in quantities of 250 to 1500 pounds per hour . . . even more, under most conditions, if full-size units are combined with Rangette units. And at speeds best for efficient, relaxed washing, and coordination with other processes.

All combinations include the famous patented Tensitrol® Washer . . . all are of stainless steel construction throughout.

The layout sketched herewith is only 10 by 14 feet in overall floor area. Many other arrangements can be suggested by Rodney Hunt engineers to adapt the Rangette unit to any available floor area. Write for our NEW catalog on Rodney Hunt Bleaching Ranges and Rangettes.

RODNEY HUNT®

Manufacturing Engineers Since 1840

RODNEY HUNT MACHINE CO.
66 MILL STREET, ORANGE, MASSACHUSETTS, U. S. A.

"Rangette" is a Tradename of Rodney Hunt Machine Co.

For more information, write direct or use Reader Service post card.

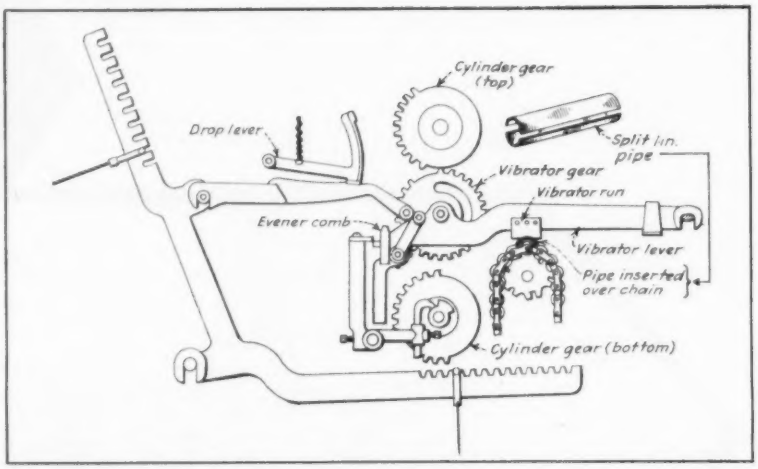
Kinks and Short-Cuts

Remove Vibrator Comb With Split-Pipe Tool

Removing a vibrator comb from a Knowles head usually takes about 2½ hrs. when it is done by conventional method, because all the vibrators must be taken out. The job can be done in a very few minutes by the use of a split-pipe tool to hold the chain in place.

Make the tool by splitting a length of 1-in. iron pipe down the center. The length of the pipe should be equal to the roll width on the chain bar. Place the pipe section over the chain, and turn the handwheel until the chain and pipe are under the vibrators and runs. The vibrator comb can then be slipped out and replaced quickly.

Remove the pipe tool by turning back the handwheel. Make necessary adjustment to the mechanism before the loom is started. *Owen E. Stinnett, Jamestown, N. Y.*



A VIBRATOR COMB can be quickly removed from a Knowles head by the use of a split-pipe tool. Place the pipe over the chain, and turn the loom until the pipe is under the vibrator run. Remove only the comb you want to remove.

Here's a Filling Basket for Pick-and-Pick Weaving

THE FILLING TRUCK positions the filling at loom level so that weavers can change the filling in the shuttles as quickly as they used to change shuttles.

We have always had a problem with placing filling so that weavers on our C&K W-3 looms running pick-and-pick could easily reach the filling to replenish empty shuttles.

We have solved the problem with filling trucks we have built for all our looms.

First we had cast-iron bases made for the trucks. The bases weigh 50 lbs. each and are 24 ins. in diameter. A base is mounted on three swivel casters.

A 1½-in. pipe 15 ins. long is welded to the center of the base on top.

A ¼-in. steel plate that is 10 ins. wide and 15 ins. long and has six ⅜-in. holes in the edges is welded to the top of the pipe.

A canvas basket 14 ins. wide, 18 ins. long, and 12 ins. high is bolted to the top of the steel plate.

The truck is rolled to the winder room to be filled with filling when it becomes empty. Filling is laid in two rows in the basket so that our weavers can quickly select the color or type of filling to go in the shuttles.

This truck eliminates our old makeshift trucks and filling stands because it does the job that was formerly done by both.

Another advantage of the new truck is that the filling is so easily accessible to the weavers that they can change the filling in the shuttles as fast as they formerly changed the whole shuttle. Now we do not have to buy extra shuttles for pick-and-pick weaving.

Because the truck rests on the floor, the vibration of the loom does not affect the filling and cause it to slough off the bobbin.

All filling is used from the truck before new filling is put in. When the old stands were used, filling in the bottom of the box was often left for weeks and new filling was poured in on top of it. Now all filling is freshly conditioned.

The new truck is also easy to keep clean; we just turn it over on its side when it is empty and whisk it out with a broom. *Leslie Hayter, Huntingdon, P. Q.*

We Use a Spring To Guide Shuttles

Shuttles dropped from the "dummy" shuttle box on the transfer on C&K S-3 looms often go into the shuttle-receiving can at an angle and force the can out of position to receive other shuttles when they are transferred. Broken shuttles and broken loom parts result when the shuttles fall against moving loom motions.

We made a device from discarded brake-band stock to eliminate this trouble. The brake band is split into ¾-in. widths.

A ¼-in. hole is punched into a short length of the split brake-band stock ½ in. from one end. This end is bent at a 90° angle 1 in. from the end. The long end of the stock is bent to a gentle curve with the concave side toward the short end.

A ¼-in. hole is bored in the back of the dummy box, a ¼-in. machine bolt with the head ground flat is inserted from the back of the shuttle box through the hole, and the spring is bolted to the shuttle box. The hole is bored in the box to position the spring ½ in. from the shuttle spur when the shuttle drops into the dummy box.

If the head of the bolt is not ground off enough, it will rub against the lay end and make the shuttle box hang.

Now that we use the spring on all our dummy shuttle boxes, we don't have any more broken shuttles and loom parts from tilted shuttle cans.

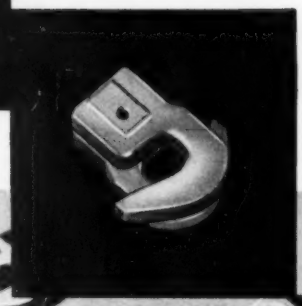
AlSiMag® 192

STANDARD DESIGN

Pig Tails

AlSiMag No. GS-22120

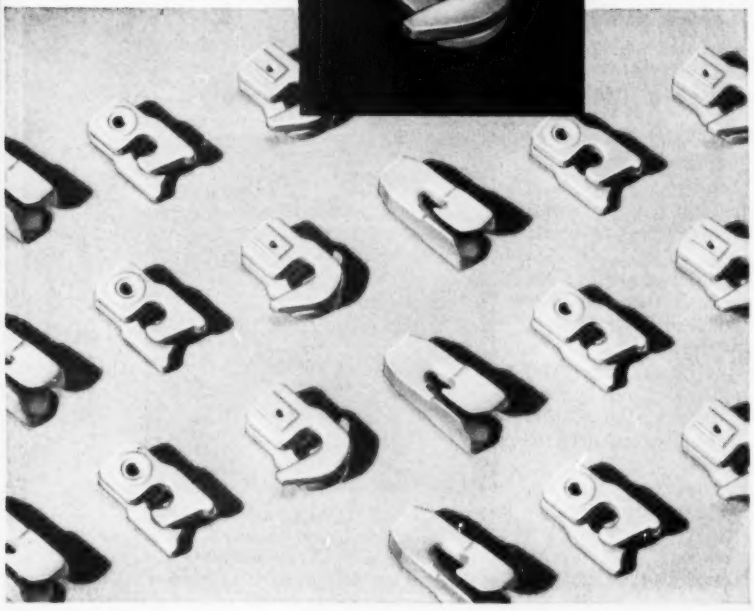
AlSiMag No. GS-30273



AlSiMag No. GS-30039

LONG LIFE • EXTREMELY HARD • HOMOGENEOUS

EASILY, QUICKLY THREADED...YARN WILL NOT JUMP OUT



CAN BE SUPPLIED IN

AlSiMag 192 (considered standard). A non-conductor of electricity. Hardness of 8 on Moh's scale. Gives exceptionally long life on most requirements. Ivory color.

AlSiMag 193. A conductor of electricity, used for dissipating static charges. Metallic grey color. Otherwise identical to AlSiMag 192.

AlSiMag 513. Super hard (9 on Moh's scale), resistant to cracking, chipping, great mechanical strength. Cost is justified where excessive wear is experienced or where satin finish must be maintained under severe conditions. Pink color.

Bright Polish or Satin Finish. Mill tests prove that satin finishes usually result in better yarn because of lighter tensions.

BEGINNING JANUARY 1, 1954, STANDARD DESIGNS WILL BE STOCKED FOR IMMEDIATE SHIPMENT. SPECIAL DESIGNS OR VARIATIONS MADE IN NORMAL PRODUCTION INTERVALS.

52ND YEAR OF CERAMIC LEADERSHIP

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Kinks and Short-Cuts

Control Waste Yarn With an Air Line

We were having a lot of trouble with waste yarn on our fancy cloths on C&K W-3 looms. The yarn was so heavy and springy that the yarn dropped out of the filling-end holder and was woven into the cloth when the holder opened.

We eliminated the waste yarn by installing an air line to blow the waste yarn under the looms.

A large air line with 100 lbs. of pressure was installed over each weaver's alley.

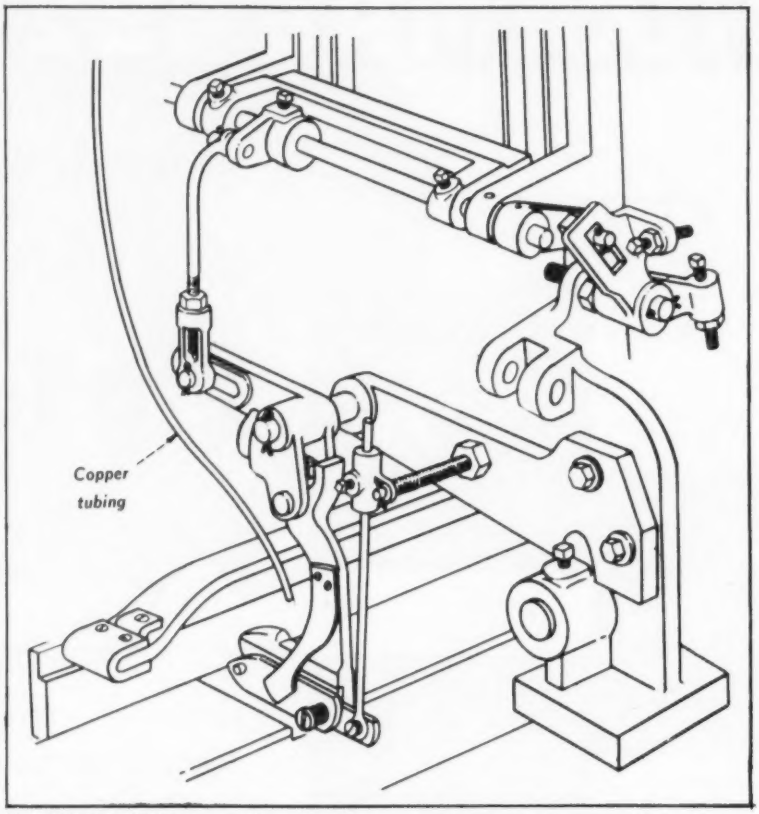
Copper tubing with a $\frac{5}{32}$-in. dia. and a $\frac{3}{32}$-in. opening is connected to the air line and run to the thread cutter on each loom.

The tubing is fastened to the front arch of the loom, and the end extends to within 2 ins. of the fiber plate on the thread cutter.

Different sizes of filling require different air pressures. A valve connected to the tubing at the loom regulates the flow of air for the various sizes of filling.

The air flow in the copper tubing is constant.

Since we have been using the air system, the waste filling does not weave into the cloth and our cloth quality is improved. *Leslie D. Hayter, Huntingdon, P. Q.*



THE COPPER TUBING comes from an air line over the center of the weavers' alley, fastens to the loom arch, and ends 2 ins. from the top of the thread cutter.

Rack on Wall Keeps Bottles Safely

HANG THE BOTTLE RACK on the wall and you'll have less trouble with broken bottles. You'll also be able to keep the floor around your drink machine cleaner, and there will be less trash put in the rack.

Use a Removable Insert To Repair Beam Journals

The ends of our loom-beam journals wear in the beam bearings of the looms. The journals don't wear rapidly, but we have so many looms that we always have beams to be repaired.

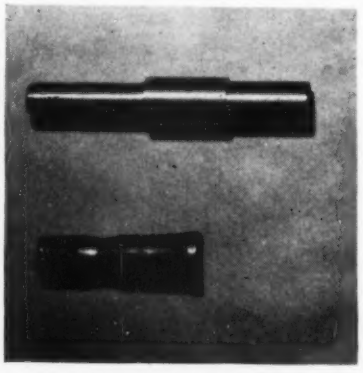
We used to build up the worn journal surfaces and then cut the welding back down in a lathe, but now we have a better way.

We remove the beam flanges and cut a 4-in. length off one journal. Then we place the beam in a lathe and bore a $\frac{7}{8}$-in. hole 3 ins. deep in the stubby journal.

We make journal inserts 7 ins. long from $1\frac{1}{16}$-in. dia. cold-rolled steel. A 2-in. length of the steel is turned down to 1-in. dia. for the beam-bearing surface. The end inserted into the beam is turned down to $\frac{7}{8}$-in. dia. for 3 ins.

We press an insert into the stubby journal and then cut the other journal off and repair it the same way.

When the inserts wear out, they are easily removed and another insert is simply pressed into the stubby journal.



THE SHORT STUBBY END has been cut off a loom-beam journal and discarded. The insert is pressed into a hole bored in the cut-off end left on the journal.

Our loom-supply costs have been reduced substantially since we have been using this method of repairing loom beams. *Carl F. Franzen, Joanna, S. C.*

NEW, LOW-COST EFFICIENCY

Clark DUO-STEP Leverage

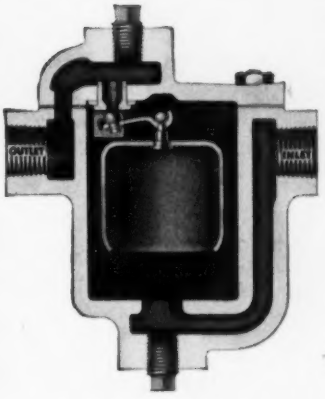
FAMOUS DUO-STEP LEVERAGE IS NOW AVAILABLE FOR THE FIRST TIME ON THESE SMALLER SIZED STEAM TRAPS. GET HIGHEST DRAINAGE CAPACITY AT LOWEST COST.

● Duo-Step is the revolutionary double fulcrum principle that affords maximum leverage to "crack" the valve from the orifice seat, teamed with "Follow-through" power that opens the orifice completely. This double action actually gives you double the drainage capacity of ordinary steam traps.

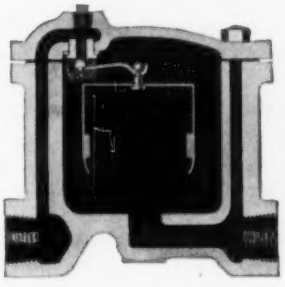
Model 60-D traps are of cast semi-steel construction, designed for pressures up to 200 P.S.I. and temperatures to 400° F. Duo-Step levers and brackets of stainless steel construction. Seats and discs are of Clark-loy. ½" or ¾" horizontal inlet and outlet connections with ¼" test outlet and drain plug. Vertical inlet can be furnished in ½" or ¾" size.

Model 70-D traps are of cast semi-steel construction, designed for pressures up to 200 P.S.I. and temperatures to 400° F. All working parts of stainless steel construction. Seats and discs are of Clark-loy. Horizontal inlet and outlet connections located at bottom of trap body for close-to-the-floor installations.

Model 70-TD for pressures to 150 P.S.I. and temperatures to 375° F. is available WITH BUILT-IN THERMAL BY-PASS at additional cost.

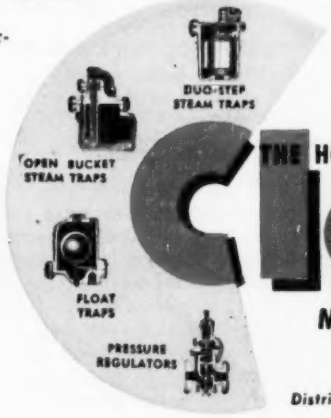


CLARK 60-D TRAP



CLARK 70-D TRAP

FOR COMPLETE INFORMATION CONTACT YOUR CLARK REPRESENTATIVE OR WRITE FOR *NEW* DUO-STEP BROCHURE



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Kinks and Short-Cuts

How We Handle Our Slasher Waste

SIX CANVAS BASKETS are marked for each type of slasher waste, and a specially built truck keeps them neat and transports them to the scales for weighing at the end of each shift.

To keep our slasher waste separated, we used to have a big box with a lid on it and six bins inside. We would empty each bin into a separate sack for weighing at the end of each shift.

The trouble with the old system was (1) there was too much handling, and (2) we could never find the bags.

Now we have six canvas baskets on a truck. Each basket is for a different type of waste. The size of the baskets was determined by the greatest amount of one type of waste that we could expect for one shift. Each basket is 26 ins. long, 12 ins. wide, and 20½ ins. deep. There is no taper on the wood-base baskets.

After we decided on the basket size, we had the truck made to fit six baskets.

Now we just push the truck to the scales, weigh each basket (the allowance for basket weight is the same for all of them—12 lbs.), and then dump the baskets into the waste collectors. —*H. T. Sellers, Simpsonville, S. C.*

Counter-Top Material Keeps Knitted Cloth Clean

As the finished rolls of cloth were removed from under our circular knitting machines, the cloth came in contact with the oily and greasy floor. A waste piece of material had to be cut from each roll. We tried dropping the rolls of cloth on cardboard but found this idea not practical because the oil from the floor soaked through.

We solved the problem with an inexpensive ⅝-in. plywood board covered with Sandran vinyl counter-top material. Linoleum paste holds the vinyl to the plywood.

The sizes of the board vary with the sizes of the machine. A handle is put on one end of the board for easier handling, and four furniture buttons are screwed to the bottom for feet.

When the roll of cloth is finished, there is about a 3-in. clearance between the roll and the floor. The surface of the board is greaseproof and oilproof, and it is wiped clean before it is slipped under the roll, which is released and pulled out on the board. When the board is not in use, it is left standing on the rubber-tack ends.

We Check Loom Speeds With a Tachometer

We used to check loom speeds (picks per minute) by holding one finger at the fell of the cloth and counting the number of times the handrail struck the finger in one minute.

Now we use a tachometer to check the speed of looms.

We clean the oil from the center point in one end of the loom crankshaft, daub the hole with a crayon (commonly used to mark yarns) to keep the tachometer point from slipping, and record three consecutive readings of the tachometer.

We don't have to use a watch to check loom speeds any more.

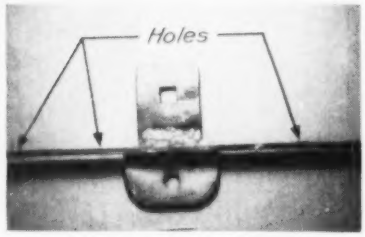
The tachometer gives us a more accurate check of loom speeds in less time than the counting method.

Use an Oil Spray To Protect Unused Machines

To prevent our machines and parts from rusting when they are not being used, we coat them with a film of oil.

We use an ordinary insecticide spray gun filled with light machine oil and find that this method is quicker and more thorough than brushing. The spray-gun method also insures that oil gets into the places that can't be reached with a brush. *W. M. Scott, Enfield, England*

Rebuild Checkstrap Brackets With Steel Strip



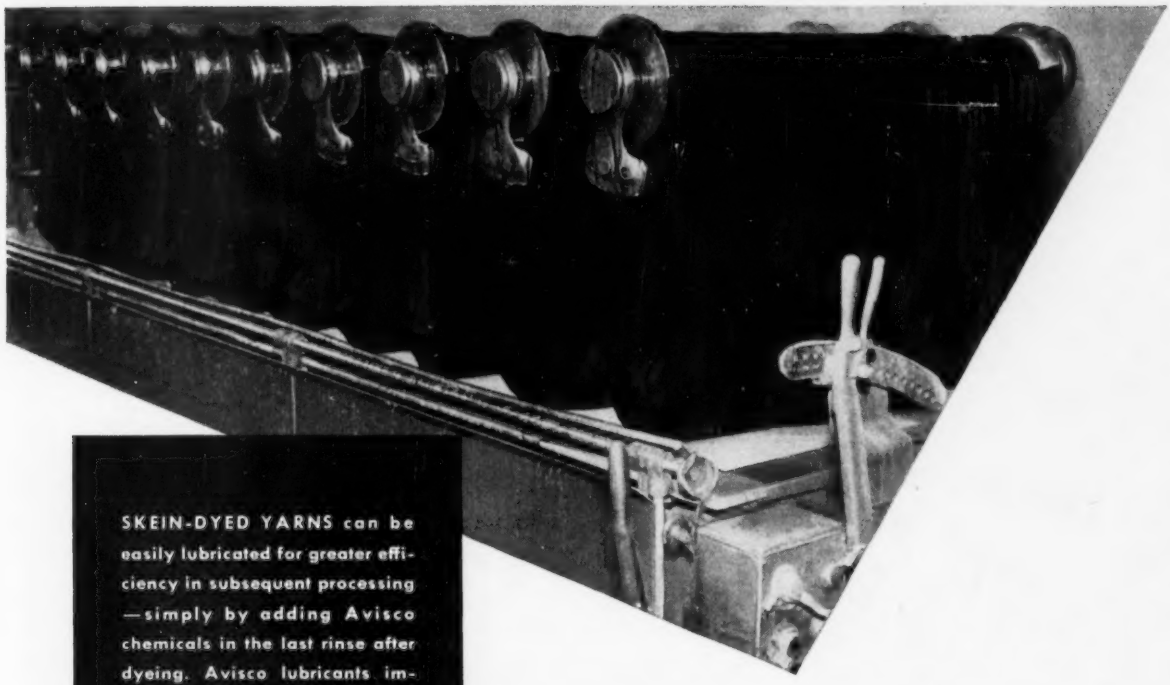
THE CHECKSTRAP BRACKET is welded to the piece of steel stock that has three holes bored in it to go over bolts in the bottom of the lay.

The checkstrap brackets on the back of the lays on our modified D looms (Draper) sometimes work loose; and since it is not easy to see loose brackets, the loom often runs until the plate in the lay that holds the bolt is broken.

When this break occurs, it is hard to refasten the checkstrap bracket securely.

We have found an easy way to repair these broken parts permanently. We cut a 12-in. length from a piece of ⅜x1-in. steel stock. The checkstrap bracket is welded to the steel stock to form a T. The steel stock has three holes bored in it so that it can be fastened to the bottom of three of the bolts that hold the lay-end plate to the lay.

We keep (in the stock room) several brackets welded to steel stock already bored to fit the bolts. When a bracket comes loose, we remove three nuts at the bottom of the lay-end plate, slide the steel stock underneath the lay end and push it over the bolts, and replace the nuts; and the loom is ready to run. *C. M. Whitcher, Midland, Ont.*



SKEIN-DYED YARNS can be easily lubricated for greater efficiency in subsequent processing—simply by adding Avisco chemicals in the last rinse after dyeing. Avisco lubricants improve winding . . . aid in making more uniform fabric . . . promote better stitch formation. They do not affect shade values, or colorfastness to light and washing. These solid, 100% active materials do not settle out or deteriorate in storage. They emulsify readily in hot water.

Improve processing of dyed yarn . . .

with AVISCO textile chemicals

The surface of your yarn—which determines much of quality and processing efficiency—gets the best possible treatment when you use Avisco textile chemicals. These "jack of all trades" materials simultaneously lubricate, soften and control static. And these lubricants have exceptional stability; they never discolor, wick out, or turn rancid in storage.

Avisco textile chemicals are supplied in many varied types, applicable to processing of fiber, yarn and fabric . . . for all fibers, both natural and man-made. Avisco specialists offer expert assistance in selection of materials and techniques for using them in your own mill. Write Textile Chemicals Division, P. O. Box 455, Marcus Hook, Pa. or Textile Chemicals Sales, 1617 Pennsylvania Blvd., Philadelphia, Pa.

Send for your copy of this new booklet—"Avisco Textile Chemicals"

Avisco textile chemicals were developed in cooperation with and are manufactured by the Atlas Powder Company, Wilmington, Delaware

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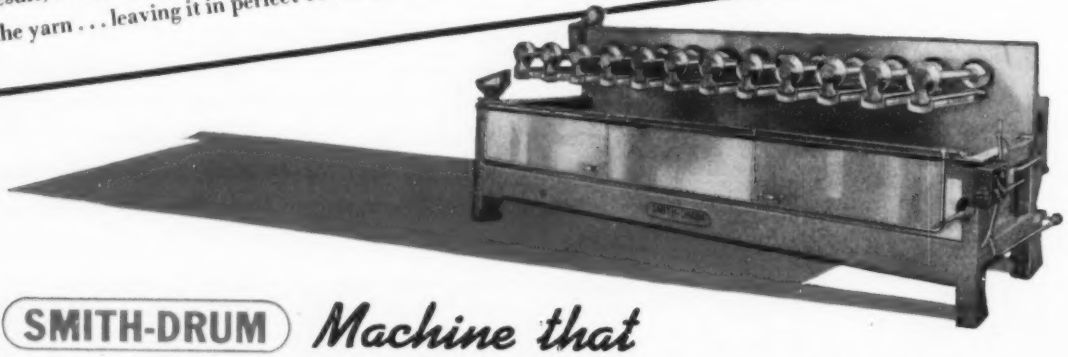
. . . and there's ONLY ONE WAY to Prevent it.

If your present skein dyeing equipment results in snarled yarn or broken filaments, you are incurring needless extra cost and time in back-winding. There is one sure way to end this waste and *only* one . . . install the SMITH-DRUM Type CSD Skein Dyeing Machine.

This is the machine that introduced the principle of "moving the liquor instead of the yarn." As a result, it entirely eliminates tangling or breaking of the yarn . . . leaving it in perfect condition for winding. It also dyes yarn more quickly and uniformly than other methods, resulting in savings of from 10% to 30%. If you dye filament rayon, nylon and other synthetic yarns or fine count cotton yarns in skein form, it will pay you to get the facts on this proven money-saving machine. Write . . .

SMITH, DRUM & COMPANY
432 W. Allegheny Ave., Phila. 33, Pa.



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Outstanding TRADE LITERATURE *Free for the Asking*

NO REPEATS . . . Listed here for November are current bulletins reviewed by the editors of TEXTILE WORLD. To get the ones you need, circle the number on the Reader-Service card, as described on the preceding page.

TEXTILE MACHINERY AND AUXILIARY EQUIPMENT

A dust collector and manifold for the Whitin Model J comber are the subject of a bulletin from Turner & Davis Engineering Co., Inc. Noils removed by the comber are sucked up by the airflow through the manifold. **(F-1)**

A sliver-lifting frame with plastic guides is described in a bulletin from Gladwin Plastics. Said to give good support to weak sliver, the guides may be used behind roving frames or pin drafters and to eliminate loops to lap backing machines. **(F-2)**

A heddle-staggering motion is described in a pamphlet from H. J. Theiler Corp. The new motion prevents the bending of shafts when several springs have to be used. **(F-3)**

An automatic cutter to cut cloth, plastic, paper, and other soft materials at speeds of 6 to 100 ft. per min. is described in a folder from Hobbs Mfg. Co. Electronic controls measure the material being cut and coordinate all automatic operations. **(F-4)**

A reverse roll coater is described in a bulletin from John Waldron Corp. The coater meters an accurate thickness of coating with two precision-ground chilled-iron rolls. The web is supported by a rubber backing roll. **(F-5)**

Stainless-steel and monel-metal utensils are described in a catalog from Metalsmiths, Div. of Orange Roller Bearing Co. Pictures show how a mixed-bed demineralizer produces high-purity water by the ion-exchange method. **(F-6)**

Gas specific-gravity measurement instruments are described in a catalog from Fischer & Porter Co. The device is used for recording the carbon-dioxide content of combustion products, and to measure, indicate, record, or control the specific gravity of gases. **(F-7)**

Recording potentiometers are the subject of a bulletin from Bristol Co. The instruments, available for time-temperature control, regulate temperature by means of valves. Heating, soaking, and cooling can be accurately maintained. **(F-8)**

Flow-rate meters are described in a catalog from Fischer & Porter Co. How the variable-area meter works, its basic flow equation, and information on calibration, range, pressure loss, piping effects, viscosity effects, purging, and pulsating flow are discussed. **(F-9)**

Instruments for metering and controlling are described in a catalog from Bailey Meter Co. Records are made on 12-in.-dia. 24-hr. graduated charts. Indicators measure directly or act as remote receivers. **(F-10)**

D.c. motors (½ to 300 hp.) and d.c. generators are described and illustrated in a bulletin prepared by Louis Allis Co. Cutaway drawings show mechanical construction and enclosures for different operating conditions. D.c.-motor applications, special d.c. designs, and motor-generating sets for converting a.c. to d.c. are also described. **(F-11)**

Toggle switches and toggle-switch assemblies are described in a catalog from Micro Div., Minneapolis-Honeywell Regulator Co. The toggle levers are sealed against moisture and foreign matter; the solid silver contacts are riveted, and the moving copper contact provides maximum conductivity. **(F-12)**

SUPPLIES AND CHEMICALS

A masonry water repellent is described in a leaflet from The Arco Co. A photograph of a highly porous cement block shows the comparative repellency of treated and untreated surfaces. **(F-13)**

Liquid nonionic synthetic detergents are described in a booklet from Armour & Co. Energetic S, used for boiling off synthetic fibers, is intended for use in the presence of petroleum and aromatic solvents. **(F-14)**

Ethylene amines are the subject of a bulletin from Carbide & Carbon Chemicals Co., Div. of Union Carbide and Carbon Corp. The amines are used in resins, wetting agents, water softeners, and fungicides. Ethylene diamine is used in solubilizing water in soluble acids, resins, and gums and for neutralizing oil acidity. **(F-15)**

Fiber glass for insulating metal buildings is the subject of a folder from Fiber Glass Div., Libby-Owens-Ford Glass Co. Lightweight blankets up to 300 ft. long in widths of 18, 24, 36, 48 and 72 ins. are discussed. **(F-16)**

Roll covering for loom take-up rolls is described in a brochure from The Carborundum Co. The covering in various degrees of coarseness can be used for all types of textiles. Two grit samples are fixed to the brochure. **(F-17)**

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Reader Service (Continued)

"Flexible Plastic Coating Guards Against Corrosion" is the title of a folder from Stonhard Co. The coating is used in maintenance areas where rust and corrosion are special problems. **(F-18)**

ENGINEERING and MAINTENANCE

Portable power tools are the subject of a catalog from Syntron Co. Information on portable electric drills, screw drivers, nut runners, polishers, sanders, guiders, and an electric impact wrench is given. **(F-19)**

Internal down-flow purifiers are described in a bulletin from Steam Specialties Div., U. D. Anderson Co. Selection tables to guide the user in selecting purifiers for steam, air, gas, or vapor installation are given. **(F-20)**

Packaged automatic boilers are described in a bulletin from Orr and Sembower, Inc. Cutaway views show the design of the boiler. The three-pass design, forced draft, and controls are described with the firing equipment for gas and light and heavy oils. **(F-21)**

Permutit ion exchangers are described in a bulletin from The Permutit Co. A history of ion-exchange engineering and data on the proper selection of ion exchangers are given. **(F-22)**

Vertical-pump motors are shown in a bulletin from Louis Allis Co. Various uses for hollow and solid-shaft vertical-pump motors and types of enclosures available for these units are described. Details of the nonreverse ratchet and types of oil- and grease-lubricated thrust bearings available are given. **(F-23)**

A hand pallet stacker is described in a bulletin from Raymond Corp. This tiered truck, designed for small plants and warehouses, has a capacity of 2,000 lbs. and can handle pallets from 30 to 48 ins. and tier them to 115 ins. **(F-24)**

Maple-floor problems are discussed in a folder by The Maple Flooring Manufacturers Assn. Suggestions are given for the installation and care of Northern hardwood flooring, with emphasis on the allowance for expansion, damp-season ventilation, and handling of flooring before it is laid. **(F-25)**

Air-handling units are described in a bulletin from Westinghouse Sturtevant Div. Detailed installation possibilities are given for central-plant air conditioning, exhausting heat fumes or vapors, and heating and ventilating requirements when cooling is not needed. **(F-26)**

Spray-type deaerating heaters are described in a bulletin from Graver Water Conditioning Co. The functions and requirements of deaerating heaters and accessory equipment needed for best results are discussed. Flow charts in typical applications are shown. **(F-27)**

Pipe tools are described in a catalog from Beaver Pipe Tools, Inc. Information on pipe and bolt threaders, square-end sawing vises, pipe reamers, cutters, and pipe and bolt machines are given. **(F-28)**

Controlled-volume pumps are described in a bulletin from CC Pump Mfg. Div. Liquids are delivered in volumes as low as 3 milliliters per hour and as high as 50 gals. per min. against pressures to 30,000 psi. **(F-29)**

Boiler burner units are the subject of a brochure from Iron Fireman Mfg. Co. Cutaway drawings show the layout of units. Staggered-tube design and greater furnace volume provide efficiencies of 80% or greater. **(F-30)**

Electric-clutch controls for power machines are the subject of a brochure from Micro Div. of Minneapolis-Honeywell Regulator Co. The microtrip press control provides a means of electrical control for any manually operated power machine. **(F-31)**

Gate valves are the subject of a circular from Lunkenheimer Co. The advantages of flange and screw-gate valves equipped with either double or solid

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● Flexibility without the least friction; therefore, no dirtying of oil

● Exclusive oil cushioning. Very gentle and very effective

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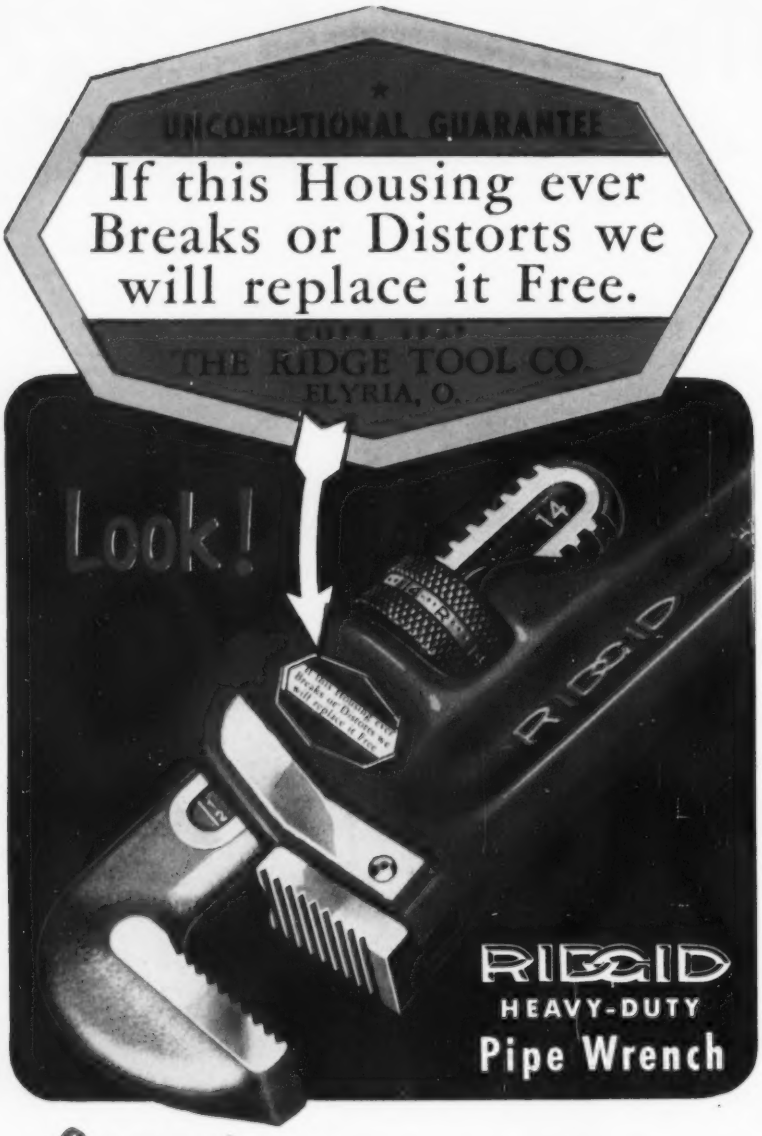

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Work-Saver Pipe Tools

Reader Service (Continued)

nickel-alloy wedge disks in rising stem designs and with a single-wedge disk in nonrising stem design are discussed. **(F-32)**

Centrifugal blowers and exhausters for air or gas handling are described in a bulletin from Billmyer Blower Div., Lamson Corp. Performance data and technical data on agitation of liquids, air for combustion, vacuum cleaning, and pneumatic conveying are given. **(F-33)**

Polyvinyl-chloride pipe and tubing are described in a bulletin from Alpha Plastics, Inc. The pipes are made from a special compound of vinyl-chloride polymer of high molecular weight and differs from the hard vinyls by having lower plasticizer content. **(F-34)**

"Latest Approved Industrial Lighting Specifications" is the title of a book from the Rim Standards Institute. Included are three officially approved new specifications for semidirect industrial fluorescent units. New tables of typical coefficients of utilization and light-distribution curves are included. **(F-35)**

Switches for introducing adjustable time delays into electrical circuits is described in a bulletin from AGA Div., Elastic Stop Nut Corp. of America. The unit is small, lightweight, and used on control boards, in box assemblies, and on a variety of equipment. **(F-36)**

Steam-vapor and high-pressure combination cleaners are described in a brochure from Melsbary Mfg. Co. The cleaner uses live steam from the plant line for pressure and heat. The solution is injected under pressure for fast thorough cleaning. **(F-37)**

Floor cleaners are the subject of a circular from Hild Floor Machine Co. The cleaner picks up liquid or dry dirt without adjustment or change of filter. **(F-38)**

Fork lift trucks are described in a bulletin from Baker-Raulang Co., Baker Industrial Truck Div. The Gas-O-Matic truck uses no clutch transmission, controller, or resistors. Special attachments for various handling jobs are described. **(F-39)**

Centrifugal pumps are the subject of a bulletin from Worthington Corp. Six types of standard end-suction centrifugal pumps with various mountings, frames, and drives are illustrated. **(F-40)**

GENERAL

A self-policing annunciator is described in a bulletin from Scam Instrument Corp. Wiring diagrams, sequence listings, and specification instructions are given for industrial alarm systems. **(F-41)**

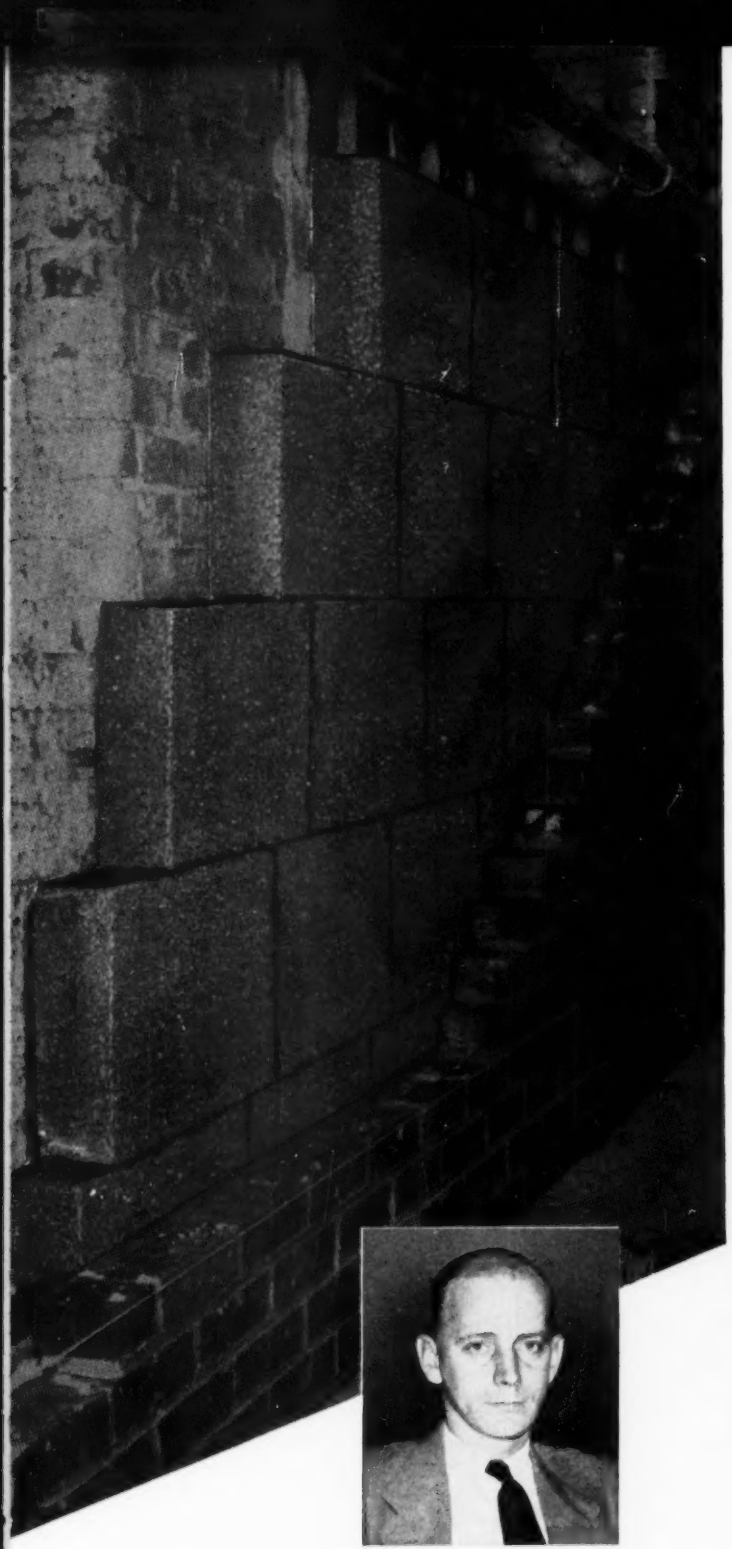
"Filing Negatives and Transparencies" is the title of a booklet from Eastman Kodak Co. The leaflet outlines tested methods of classifying, identifying, and storing photographic negatives and sheet-film transparencies. **(F-42)**

Spectrophotometry is the subject of a booklet from Beckman Instruments, Inc. Spectrophotometry is a technique for analyzing unknown substances by measuring the amount of light they absorb. Layman's language is used to describe a spectrophotometer, how it works, and what to look for in selecting an instrument. **(F-43)**

A laboratory on wheels is described in a booklet from Fisher Scientific Co. This mobile laboratory is air conditioned and can work for months on its own power plant. Water is pumped from a 45-gal. insulated copper tank. Burner gas is piped from two fireproof tanks. **(F-44)**

"How To Operate a Lift Truck" is published by Hyster Co. The book is slanted for the beginner and experienced operator. Preventive maintenance, safety, and basic materials handling are included. **(F-45)**

Sectional-type shelters are described



WALTER REGNERY, V. P. and Manager,
Joanna Cotton Mills, Joanna, S. C.

Joanna Cotton Mills reports:

"FOAMGLAS® helps maintain required humidity, eliminates wet walls"

"FOAMGLAS insulation certainly helped us solve some serious problems in our weave room," reveals Walter Regnery, vice-president and manager of Joanna Cotton Mills, the world's largest manufacturer of window shade cloth. He explains: "We had been having difficulty in maintaining critical temperatures and humidity and in avoiding dripping walls. We stopped these troubles by insulating the entire inner wall area with FOAMGLAS. Its waterproof cellular glass structure helps us maintain required conditions constantly, unlike ordinary insulations which lose effectiveness as they absorb moisture."

You will benefit greatly by insisting on fire-proof, rot-proof, rigid FOAMGLAS to insulate *your* walls, roofs, floors, piping and equipment. Write us for free sample and further facts contained in our brand-new booklets. Indicate whether you are interested in insulating buildings, refrigerated space or piping and equipment. Address Department AG-113 . . .

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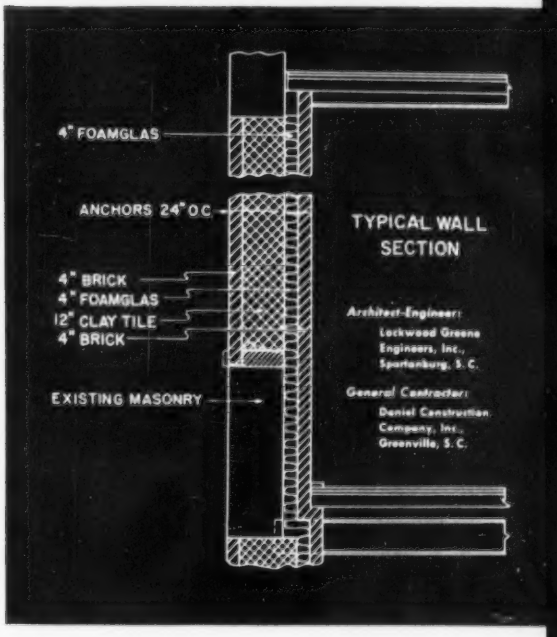

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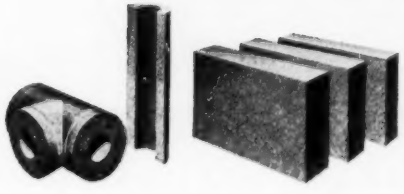
the cellular glass insulation . . . it stays dry!



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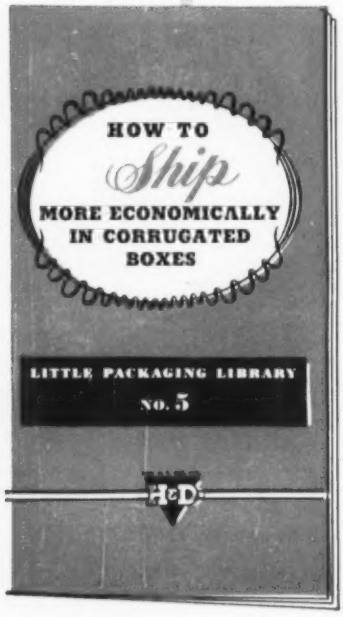

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Reader Service (Continued)

in a pamphlet from Yard-Stor Shelter Co. A few of the uses are described. Identical sections are shipped by truck in loads of six, and as many sections as required may be placed end to end. **(F-46)**

TV distribution of promotion films is the subject of a brochure from The Princeton Film Center. The distributors offer to sponsors of 16-mm. promotion films a study of opportunities in showing their films on free public-service programs. **(F-47)**

"How to Make Your Own Slide Film Presentations for Less Than $20" is a booklet from Minnesota Mining and Manufacturing Co. The audio-visual method can be applied to sales and employee training and in sales meetings. Five steps required to produce a sound-slide presentation are outlined. **(F-48)**

General accounting applications for the typewriter tape punch are described in a booklet from International Business Machines Corp. Punched cards for machine accounting are made from a perforated tape at the same time a document is typed. The device is used for invoices, purchase orders, and personal notices. **(F-49)**

Decorative fabrics is the subject of a booklet from Mooresville Mills. Pictures and a flow chart tell the "idea-to-outlet" story. Miniature hand looms are used to create new fabric ideas. **(F-50)**

Exploring the Community

(Continued from page 151)

fact that jobs were the first important factor in maintaining community morale. So he planned a staggered work system that meant every employee would have some income: wages from the jobs available or benefit of the 20 weeks of unemployment compensation, whichever fitted best at the time into the restoration program.

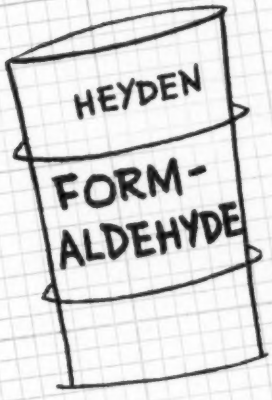
From his textile employees, crews were formed for removing debris. An agreement was made with the construction engineering firm handling the rebuilding of the mill to use former textile-mill workers in the demolition and construction work.

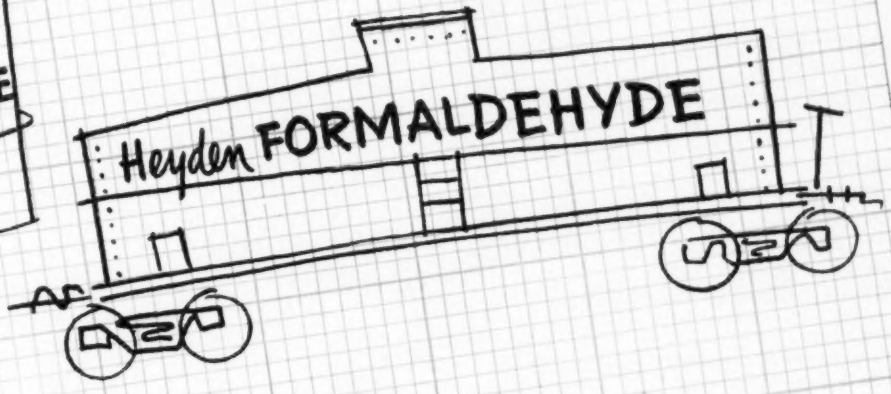
About 50 Buck Creek employees were transferred to the company's Columbiana plant. Then Mr. Phillips called on all his neighbor mills in Alabama to help him place the balance of his workers on the payroll, an unprecedented statewide act of neighborliness. Soon Buck Creek employees, on a temporary basis, were working at Avondale, Micolas and Opp Mills, Huntsville, Pepperell, Crystal Springs Bleachery, and elsewhere. The neighbor-mill jobs were taken by those who had relatives in the various localities so they could board with their kinfolks. Their families remained in Siluria.

Since the cyclone, no rent has been charged on any company-owned houses. A full-time clinic has been operated without charge to the people of the village.

Two days after the tragedy, the

HIGHEST QUALITY IN EVERY DROP





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The All New MOBILIFT 4000 Pounder

Has Everything You Want in a "Sit-Down" FORK LIFT TRUCK

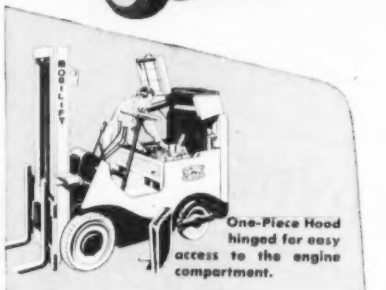
Model D-424
4,000 lbs. capacity
at 24" load center
83" hydraulic mast
lift height 108"

Here are Just a Few of the Trend-Setting Features...

- **Chrysler 65-bhp 6-cyl. Gas Engine**
- **Chrysler Gyrol Fluid Coupling**
- **Mobil-Matic Drive** for smooth, positive power transmission through the MOBILIFT Oil-Immersed, Multiple-Disc Clutch and **Constant-Mesh Transmission**—Two speeds forward, two reverse.
- **One Lev-R-Matic Control** for forward and reverse...just *Push* to go forward—*Pull* for reverse—NO CLUTCH PEDAL—NO GEARS TO SHIFT!
- **MOBILIFT Full-Floating Drive Axle.**
- **Hydraulic Service Brakes.**
- **Combination Ball-Bearing Worm & Nut Type Steering.**
- **Easy to Get On and Off**—no obstructions. Free access from left or right side.
- **One-Piece Hood Raises for Easy Service Accessibility.**

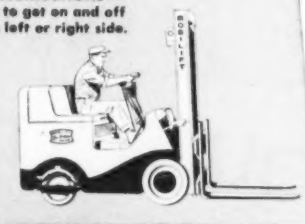
These—and many more—exclusive MOBILIFT features makes this new D-424 the lift truck for you!

Write today for complete details.



One-Piece Hood hinged for easy access to the engine compartment.

NO OBSTRUCTIONS—Easy to get on and off from left or right side.



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1113 SPRING STREET, N. W., ATLANTA

work of cleaning up the mess left by the cyclone was begun. It took nearly two months of continuous effort to remove the cyclone trash, including blasted trees, demolished houses, and bits and parts of timbers and roofing. The mill building had to be demolished in part before reconstruction could be undertaken. Some 90,000 square feet, almost the equivalent of two acres of floor space, had to be pulled down to ground level and rebuilt completely.

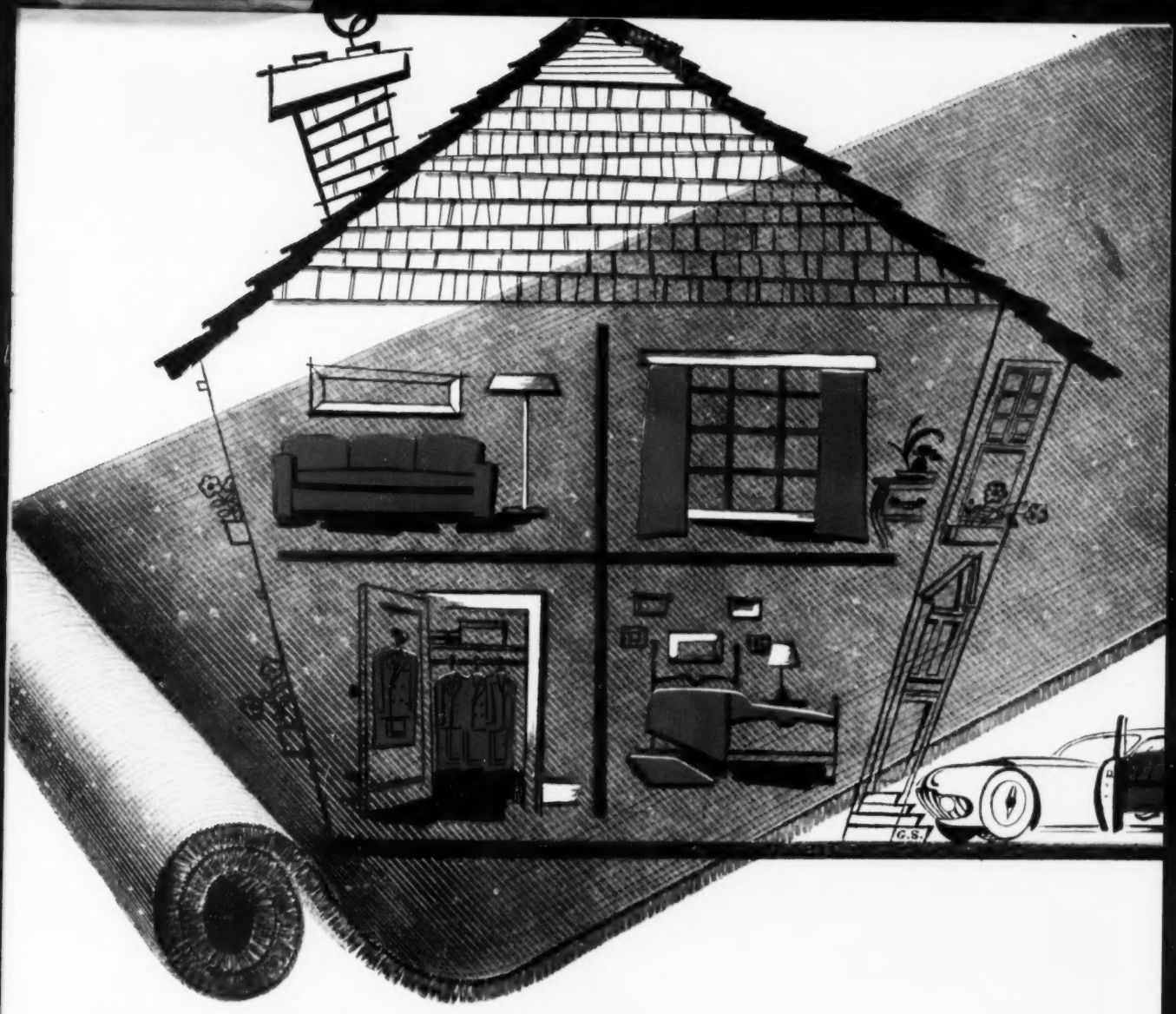
Each day, the people of Buck Creek Cotton Mills became more reassured of their jobs and their future. They saw the mill being restored on an even larger scale than the destroyed plant. Space and equipment in the opening and picking rooms are being doubled. More modern machines are being placed in other departments. The cloth warehouse is being enlarged. A better fire protection system is being installed. When completed, the new Buck Creek plant will be bigger and more modern than ever. Everything is being rebuilt or replaced for improvement in working condition.

The village, too, will be neat and attractive. Each of the 185 houses left by the cyclone has been painted, repaired, and completely redecorated inside. The 65 unroofed have, of course, new roofs. Twelve new houses will be built to replace those demolished by the storm.

And although the old big shade trees have disappeared, an extensive landscaping program will be inaugurated as soon as the planting season permits. The lost shade trees will be replaced with fruit trees: apples, plums, and some peaches. In future years, they will give back both shade and eating pleasure to the people of the community. Shrubbery, grass, and flowers, in that softly mild climate of mid-Alabama, will make the village beautiful again in a brief growing season.

By Christmas time, those who have been working in other mills will be coming home to their jobs and their families. Those who have been busy on the reconstruction program in the village and in the mill will soon be able to turn from their temporary carpentering and building to their old skills in the mill.

The cyclone left a wide trail of havoc, but in the aftermath it re-established a bond of strong, mutual community understanding. The textile workers of Buck Creek will be able to say with a great deal of pride something that is seldom heard in this day and generation "Yes, I work at Buck Creek Cotton Mills, and man alive, I helped build that mill!"



When Textile Executives "SEE RED" *it's time to coat with* KRALAC®

- **Do coating compounds often cause dye *discoloration and breakdown* in your upholstering fabrics?**
- **Do your decorative flat fabrics sometimes suffer from *poor body and strength*?**
- **Do finishing materials in your rayon fabric processing tend to *rub off and become tacky*?**

Then, it's high time you used Kralac and stopped "seeing red" when mill reports continually indicate coating and finishing problems.

New Kralac is a plastic latex especially developed by Naugatuck Chemical for coating and finishing both pile and flat fabrics. Not only does it end dye discoloration, it also improves locking, tensile and tear strength. And it never rubs off and becomes tacky. What's more, Kralac has far superior clarity, is **practically odor-free, gives high tensiles without curing.**

Whether you manufacture carpets, automotive interiors, shower curtains or any other fabric, it will pay you to coat with Kralac. It needs no expensive and complicated equipment—**can be applied by standard coating methods in mills everywhere.**

Find out how Kralac can **turn your problems into profits**–can give your product a millful of wonderful new properties quickly, easily, safely and surely. Send the coupon below.

Naugatuck Chemical, **3211** Elm St.
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Please send technical data on Kralac for textiles to:

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EVERYTIME YOU MANHANDLE A PACKAGE
YOU ADD TO THE COST OF YOUR PRODUCT
AND NOTHING TO THE VALUE

The answer is simple—
put your packages on conveyors—
put them on **ALVEY** Conveyors

An experienced Alvey Engineer is available to confer with your technical staff in reviewing your present conveyor system and package handling methods. There have been many interesting cost saving devices and ingenious innovations developed recently in package handling equipment that may have application in your plant. Do call in an Alvey materials handling expert. No obligation, of course.

ALVEY Conveyor Mfg. Co.
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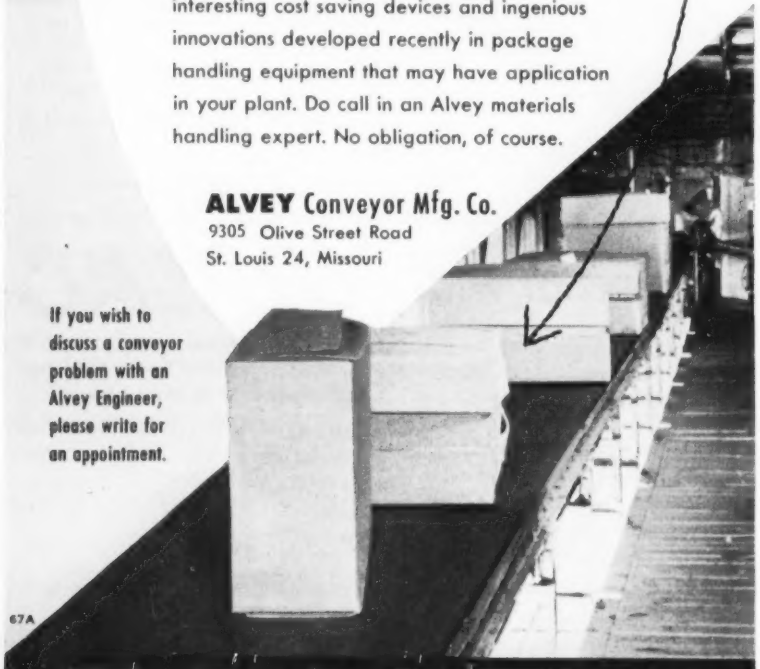
If you wish to discuss a conveyor problem with an Alvey Engineer, please write for an appointment.



67A

ALVEY

Mill Maintenance

16 Ways To Improve Elevator Operation

To efficiently and economically handle the wide range of materials moved by elevators in textile plants today, elevators must be coordinated with other pieces of equipment.

Otis Elevator Co. explains 16 ways to make your elevator an integral part of your materials-handling system. One or several of the ways may improve the service of your elevators.

1. Keep elevators moving; don't let them wait for loads. Expensive equipment such as fork lift trucks should not wait for an elevator.

Provide loading space near the elevator to accumulate loads. Have power equipment deliver material to a loading area and leave without waiting. Material can then be loaded on the elevator with less expensive equipment such as a jack lift (manual or power operated).

2. Make a complete survey of materials to be handled by elevators. The object is to minimize floor-to-floor, point-to-point handling time.

Check up on the elevator operators. The operator is an important part of the entire materials-handling problem. Be sure the operator understands the function of the elevator in the over-all plan. In cases where an elevator pickup schedule is adopted, be sure the operator understands the purpose of the schedule. See that he is supervised sufficiently to follow the schedule.

3. Install permanent or temporary roller conveyors on the elevator floor. Then loads can be pushed on or off with a minimum of time and effort.

Place roller conveyors in loading and unloading areas so that loads can be accumulated on them and moved easily. Temporary accumulation of storage near elevators reduces elevator waiting time.

4. Where monorail conveyor systems are installed, tie them in with the elevators with short sections of monorail attached to the car roof and connected to the main system.

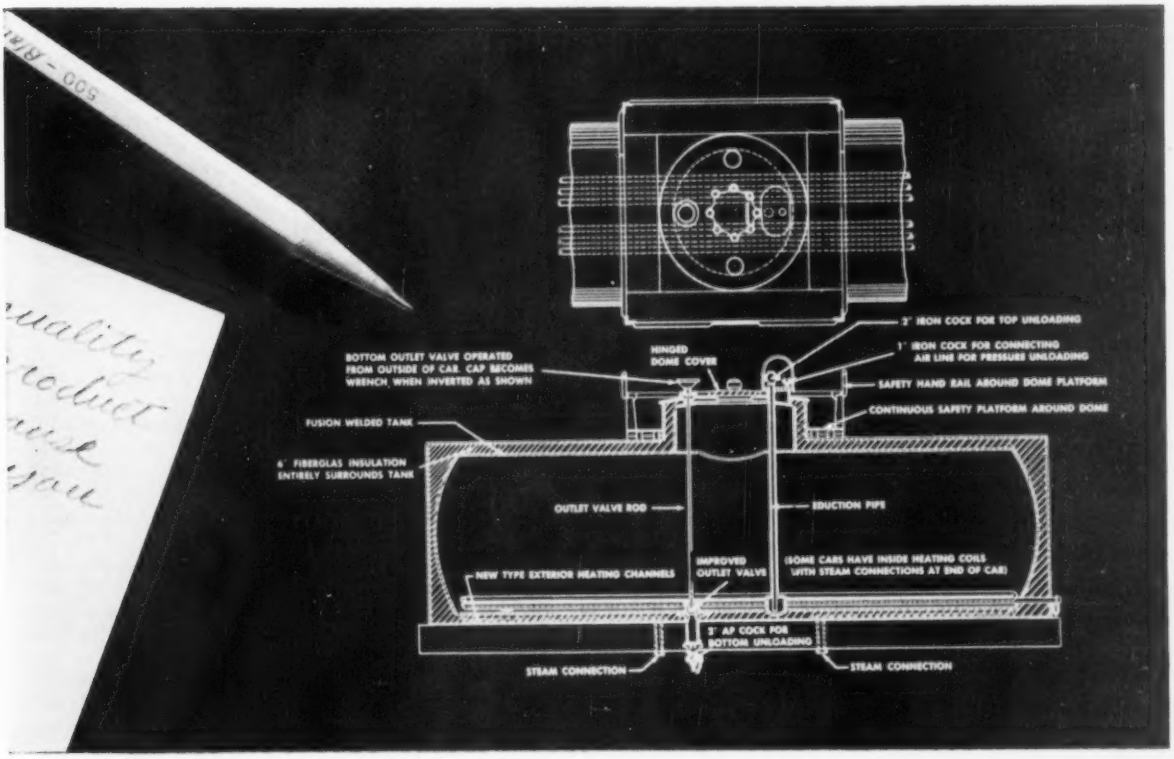
5. Use trailers that can be towed or pushed by power trucks.

6. Build special wheeled dollies to carry subassemblies to and from the elevators and throughout the plant.

7. Use more palletized loads to

MODERN TANK CARS MAINTAIN HIGH QUALITY OF DOW CAUSTIC SODA FROM PLANT TO YOU

Special design permits safe, fast shipment and convenient unloading


2" IRON COCK FOR TOP UNLOADING
1" IRON COCK FOR CONNECTING AIR LINE FOR PRESSURE UNLOADING
HINGED DOME COVER
BOTTOM OUTLET VALVE OPERATED FROM OUTSIDE OF CAR. CAP BECOMES WRENCH, WHEN INVERTED AS SHOWN
SAFETY HAND RAIL AROUND DOME PLATFORM
CONTINUOUS SAFETY PLATFORM AROUND DOME
FUSION WELDED TANK
6" FIBERGLAS INSULATION ENTIRELY SURROUNDS TANK
OUTLET VALVE ROD
EDUCTION PIPE
NEW TYPE EXTERIOR HEATING CHANNELS
IMPROVED OUTLET VALVE
(SOME CARS HAVE INSIDE HEATING COILS WITH STEAM CONNECTIONS AT END OF CAR)
3" AP COCK FOR BOTTOM UNLOADING
STEAM CONNECTION
STEAM CONNECTION

All of Dow's caustic soda shipping points throughout the country maintain a large fleet of modern tank cars.

Each of these Dow owned cars is insulated, protectively lined and fitted with nickel heating coils. They are equipped to permit unloading from the top or bottom by air pressure or pump. There are frangible discs or safety valves to prevent possible injury to workers from excessive air pressure, and they have protective plug cocks on the bottom outlet leg.

When you order caustic soda solution from Dow, regardless of whether shipment is made from Dow's four large plants at Midland, Michigan; Freeport, Texas; Pittsburg, California and Sarnia, Canada or from terminals at Carteret, New Jersey; Charleston, South Carolina or Los Angeles, California, you can be certain of dependable delivery of high quality caustic. All tank cars are expertly maintained and thoroughly washed and inspected before every loading. Caustic soda 50% solution and 73% solution are delivered in 8,000 and 10,000-gallon tank cars.

The next time you buy caustic soda, whether it is solution, solid, flake or ground flake, buy from Dow. Write for Dow's CAUSTIC SODA HANDBOOK for complete unloading, handling and product information. Wherever you are, you're close to Dow caustic soda. THE DOW CHEMICAL COMPANY, Midland, Michigan.

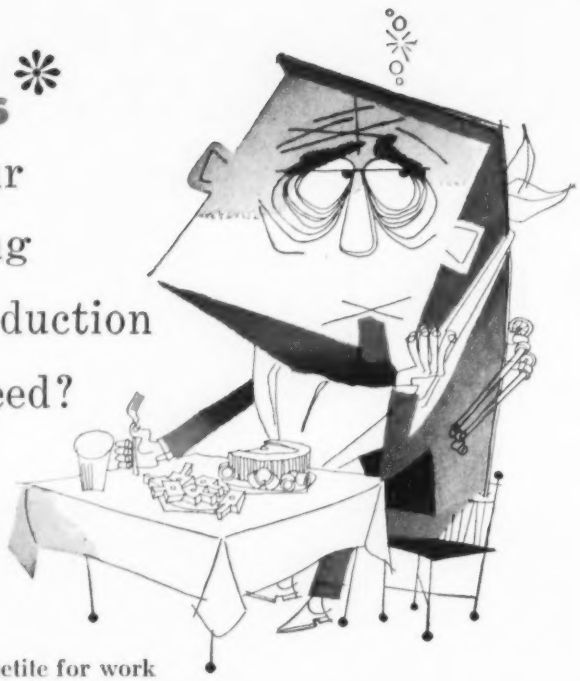
you can depend on DOW CHEMICALS

DOW

does

coil-itis *

have your processing tank production off its feed?



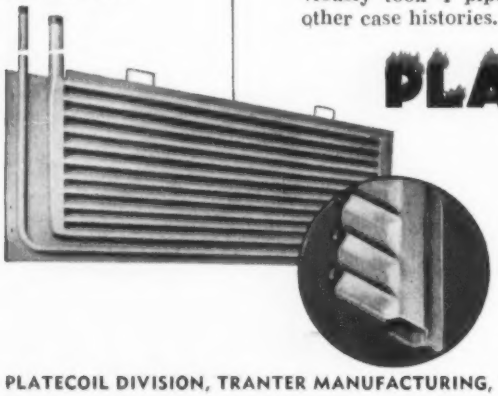
When the appetite for work of your heating and cooling processes diminishes, the trouble may well be coil-itis. For, downtime due to pipe failures and limitations can seriously delay your production flow. Switch to Platecoils, the new tonic for production, as revolutionary as the new wonder drugs. Platecoils take 50% less tank space leaving more room for greater payload. They heat or cool 50% faster. They simplify maintenance and save hours of downtime. Equally important, Platecoils cost as much as 50% less in the first place. Platecoils cure production troubles involving heat transfer and give production a shot in the arm.

Write for Bulletin P32 today!

PLATECOILS SAVE 50% IN HEAT TRANSFER COSTS

PLATECOILS ELIMINATE A 6-TO-8 HOUR-A-DAY CHIPPING JOB

At Sealed Power Corp., installation of Platecoils has completely eliminated a 6-to-8 hour-a-day chipping job. Three Platecoils now heat a tank that previously took 4 pipe coils. Ask about other case histories.



PLATECOIL

REPLACES PIPE COILS

*

Coil-itis — Diagnosed as tank heating and cooling problems. Platecoils — the prescription for solving pipe coil problems.

PLATECOIL DIVISION, TRANTER MANUFACTURING, inc., LANSING 4, MICHIGAN

obtain capacity loads on each trip.

8. Use bins, shelf trucks, and other containers on wheels, rollers, and casters to get capacity loads quickly and easily.

9. Install faster-opening, two-piece power-operated doors on the elevators. Two-piece doors operate twice as fast as one-piece manually operated doors. Power operation will further cut time lost in loading and unloading.

Doors can safely begin to open as the elevator approaches the landing so that the load can be handled as soon as the elevator stops.

10. Where the elevator has a door at only one end, consider putting a door at the other end. Avoid congestion and bottlenecks by providing a choice of loading areas. Save handling time by loading each end of the elevator simultaneously.

11. Equip your elevator for self-leveling. It takes a good operator to come within $\frac{3}{4}$ in. of the floor the first try, yet this is automatic with self-leveling control. Loads can be handled more quickly and safely if the elevator is always level with the floor.

When elevators are stopped level, impact damage to the elevator is reduced, and damage to the material being carried is also reduced. The elimination of "jockeying" even saves some power.

12. Install automatic controls to speed the service and reduce the costs of running the elevator.

13. Use push buttons on pendant fixtures so that power-truck operators can call the elevator without dismounting.

14. Use gravity for down-flow. Consider other types of conveyors such as spiral chutes installed at key points to deliver material to the next production process by gravity. These conveyors will relieve some of the down traffic on elevators.

15. Survey your elevator usage to see whether light, frequent loads now causing elevator bottlenecks can be carried by a dumb-waiter, by an inexpensive auxiliary elevator, or by other means.

Heavy personnel traffic, if a problem, can be carried on escalators or by self-service passenger elevators.

16. If your plant is one of the old ones that consist of a series of buildings erected at different times over the years, different floor levels may cause transportation problems.

An elevator with doors at each end can be installed between separate buildings to transfer material from one building to another.

Where buildings adjoin, an elevator installed in the tallest one will serve all levels in both buildings.

BENJAMIN

Versatile "Magna-Flo" SYSTEMS

go to any length to fit your lighting requirements!

Yes, ONE fluorescent lighting system for all three lengths of T12 Slimline Lamps! It's Benjamin "Magna-Flo" . . . so easily adapted to any size area, any type of location found in industry. No matter where you want fluorescent light . . . high ceilings or low ceilings, assembly lines or drafting rooms, lighting for inspection or mass production . . . whatever the seeing conditions and requirements of the task, there's a "Magna-Flo" System to fill the need exactly. As shown by the chart below "Magna-Flo" is really complete . . . yet so simple to order and specify, because just three channel sizes and four basic reflectors form the backbone of over 300 different fluorescent lighting systems!

Write for Bulletin AD 5705 for complete specification data on Benjamin "Magna-Flo" . . . see how it goes to any length to suit your fluorescent lighting needs!

"MAGNA-FLO"

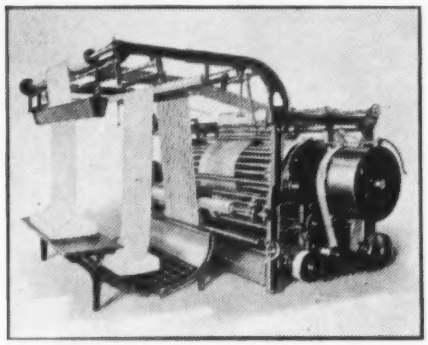
3 BASIC CHANNELS	48"	72"	96"	
4 REFLECTORS	OPEN-END	CLOSED-END	OPEN-END W/APERTURES	CLOSED-END W/APERTURES
3 LENGTHS OF T12 SLIMLINE LAMPS	48"	72"	96"	
2 LAMP HOLDERS	2-LAMP "SPRINGLOX"		3-LAMP "SPRINGLOX"	
2 TYPES OF UNITS	INDIVIDUAL		CONTINUOUS LINES	
4 ACCESSORIES	LOUVERS	PLASTIC COVERS (48" only)	GLASS COVERS (48" only)	SHIELDS
6 TYPES OF SUSPENSION	CHAIN	CONDUIT	CABLE	SINGLE-ROD / CEILING / TWIN-ROD

Sold exclusively through electrical distributors.

A Product of Benjamin Electric Mfg. Co., Dept. EE, Des Plaines, Ill., makers of famous Benjamin and Leader Line Lighting Equipment and Sound Signals for Industry, Institutions and Commerce.

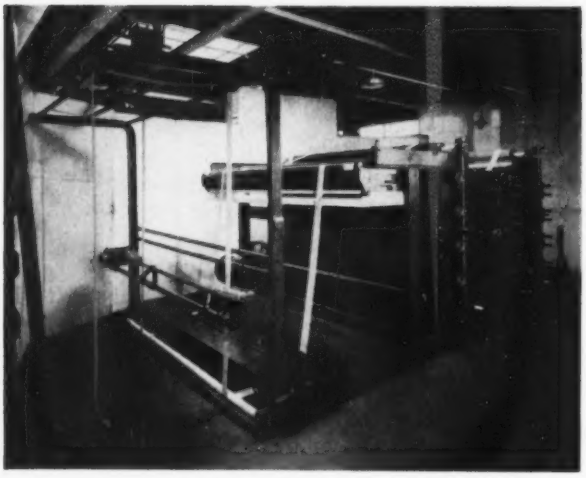
BENJAMIN "Springlox"—the exclusive "easy-in easy-out" lampholder which reduces maintenance costs and re-lamping time with a patented spring design . . . "Springlox" is standard equipment with all "Magna-Flo" units.

B-297



Cylindrical or Planetary Napper

RADICAL DEPARTURE FROM THE OBSOLETE ← TO THE NEW



PATENTED VERTICAL HIGH SPEED NAPPER
FOR WOOLENS, COTTONS AND SYNTHETICS.

ANY NUMBER OF WORKERS

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Books of Interest

Papers From AMA Personnel Conference

MAKING PERSONNEL PRACTICES AND PROGRAMS PAY OFF, Personnel Series, No. 151, American Management Association, 330 W. 42nd St., New York, N. Y.; paper, 64 pages, $1 to members, $1.25 to nonmembers.

This booklet contains the papers presented at the winter meeting of the AMA and the question and answers that followed. The booklet includes individual papers on human-relations training programs (in most cases, supervisors increase their knowledge of supervisory skills but don't apply the knowledge) and employee morale and productivity (on-the-job research shows that employee-centered supervisors get more production than production-centered supervisors); and panel discussions on explaining management development to management (if you get confused reading the four papers, the questions and answers will straighten you out) and the personnel budget (the personnel budget should be oriented to improvements in human efficiency).

If you couldn't attend the AMA personnel conference, reading this booklet is the best way to get the benefit of these stimulating papers.

Cotton-Council Book Features 121 Swatches

COTTON FROM FIELD TO FABRIC, 2nd edition, by National Cotton Council; National Cotton Council, P. O. Box 18, Memphis 1, Tenn., paper, 62 pages, $3.25.

A 16-page swatch section with 121 fabric samples is the feature of the Cotton Council's "official textbook" of the cotton industry. The samples were contributed by 70 cotton mills, and they range from sheers to awning cloth to specially finished fabrics.

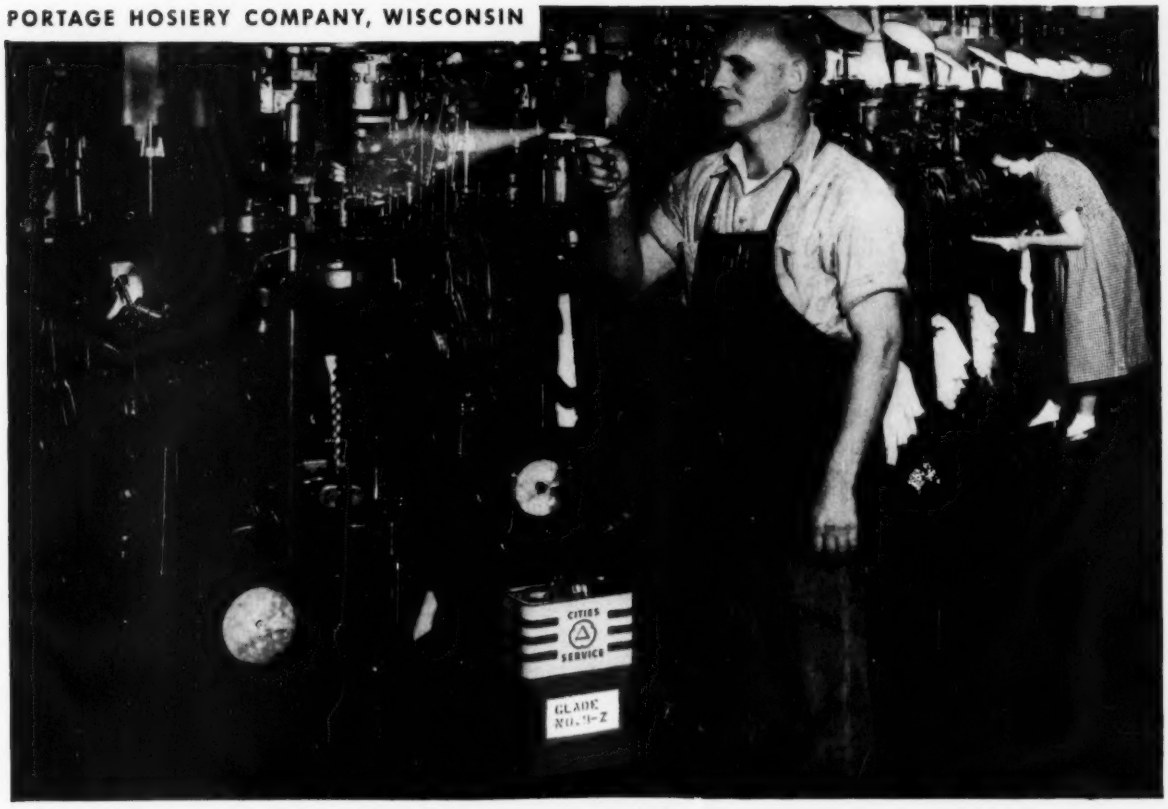
The book is intended as a readable textbook for the textile merchant, retailer, technician, teacher, and student. It tells how cotton is grown, harvested, ginned, spun, woven, and finished. Chapters have been added on cotton futures, knitting, and nonwoven fabrics.

The book has little to offer for the specialized technician in his own field, but it does provide readable technical information for the general reader.

Here Is an Excellent Reference Book on Latex

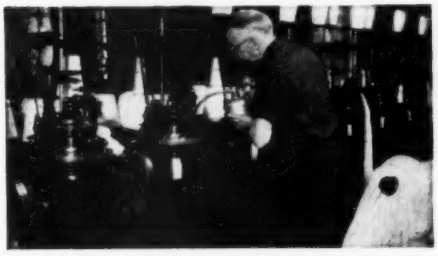
LATEX in INDUSTRY, 2nd edition, by Royce J. Noble; Rubber Age, 250 W.

PORTAGE HOSIERY COMPANY, WISCONSIN



H. S. Bronson, Supt. at Portage told us:

"YOUR LINE OF GLADE OILS SERVES OUR PLANT COMPLETELY"



OIL STAINS ON FINISHED PRODUCTS are a particular hazard in the hosiery business. Glade Oils, quality lubricants, with high "wash-out" ability, prove perfect answer.

CITIES SERVICE LUBRICATION ENGINEERS offer on-the-job lubrication tests without upsetting tight schedules found throughout the textile industry.

Cities Service Lubrication Engineer Proved How Glade Oils Were Superior in Combating "Staining"!

According to Mr. Bronson, Superintendent at Portage, Cities Service Glade Oils were not the only oils tested by them. As he put it:

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"We were also very definitely impressed with the industrial survey of our textile machinery made by your local engineer. The survey did not impose any radical changes that might have upset our heavy production schedules . . . and the result was the solution (Cities Service Glade Oils) to a serious 'staining' problem we had!"

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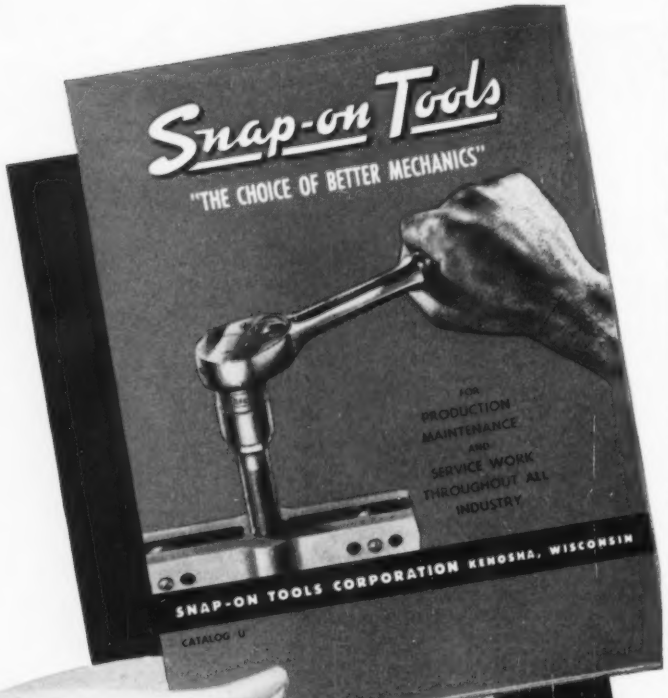
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*Snap-on is the trademark of Snap-on Tools Corporation.

57th St., New York 19, N. Y.; cloth, 912 pages, $15 domestic, $16 foreign.

The first edition of this book was published in 1936, and the progress made in latex applications since then has made it necessary to rewrite some chapters and revise others.

Besides the opening chapters on sources, properties, and dispersions of latex, there are four chapters of direct interest to textile men: "The Technical Application of Latex," "Impregnation," "Spreading," and "Rubber Threads." These topics are covered in rather general terms.

The contribution of this book is its value as a source of reference. The bibliography at the end of each chapter usually covers more pages than the chapter itself. There are 22 pages of bibliography on the impregnation of latex and 49 pages on the properties of latex. At the end of the book, an excellent author-and-subject index completes the reference guide. What this book doesn't tell you, it tells you where to find.

Company Medical Department Should Be Evaluated

INDUSTRIAL MEDICINE AND THE COMPANY RELATIONS PROGRAM, an address by R. B. O'Connor, M. D., California Personnel Management Association, 2180 Milvia St., Berkeley 4, Calif.; paper, 10 pages, $1.

Dr. O'Connor is the medical director, Loss Prevention Dept., Liberty Mutual Insurance Co., and he made this talk before the California Personnel Management Association. He urges that industrial medical departments be evaluated as to what is actually happening in the departments. He recommends that the company doctor go out into the plant and investigate the ability of a worker to do his job with a specific kind of injury.

Work of Committee D-13 Included in ASTM Report

REVIEW OF ASTM RESEARCH, prepared by Administrative Committee on Research; American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa., paper, 22 pages, free.

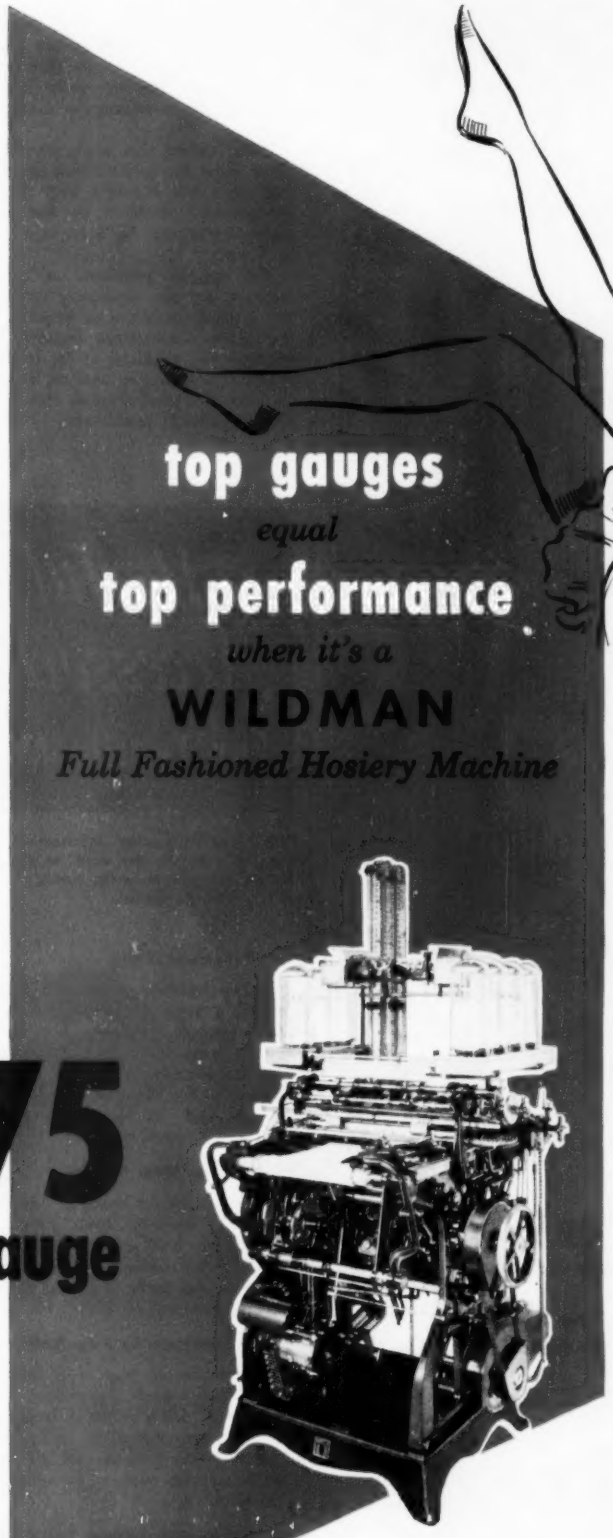
Reprints of this review of ASTM research, which was originally printed in the December, 1952, and January and February, 1953, ASTM Bulletins, have now been made available. The review summarizes the work of the various technical committees up to May, 1953.

Work by Committee D-13 includes research on cotton, wool, rayon, abrasion and wear tests, glass fiber, felt, and tests for bleaching, dyeing, and finishing.

Book Explains Problems That Come Up in Bargaining

COLLECTIVE BARGAINING: Negotiations and Agreements, by Selwyn H. Torff; McGraw-Hill Book Co., 330 W. 42nd St., New York, N. Y.; cloth, 323 pages, $5.50.

The value of this book is its objective



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Fine hosiery that satisfies the consumer — week in, week out — offers performance that pleases the market to re-order. And the highest gauges, produced consistently right, guarantee her this performance now.

The higher the gauges, the more the elasticity in the stocking; the tighter the stitch the greater the resistance to snagging; a better-wearing 12 or 15 denier stocking can be made on 75 than on coarser gauge machines. And, of course, with the tighter stitch she gets that desirable dull finish — the luxurious look — she wants: Top performance with the height of elasticity, wear, beauty.

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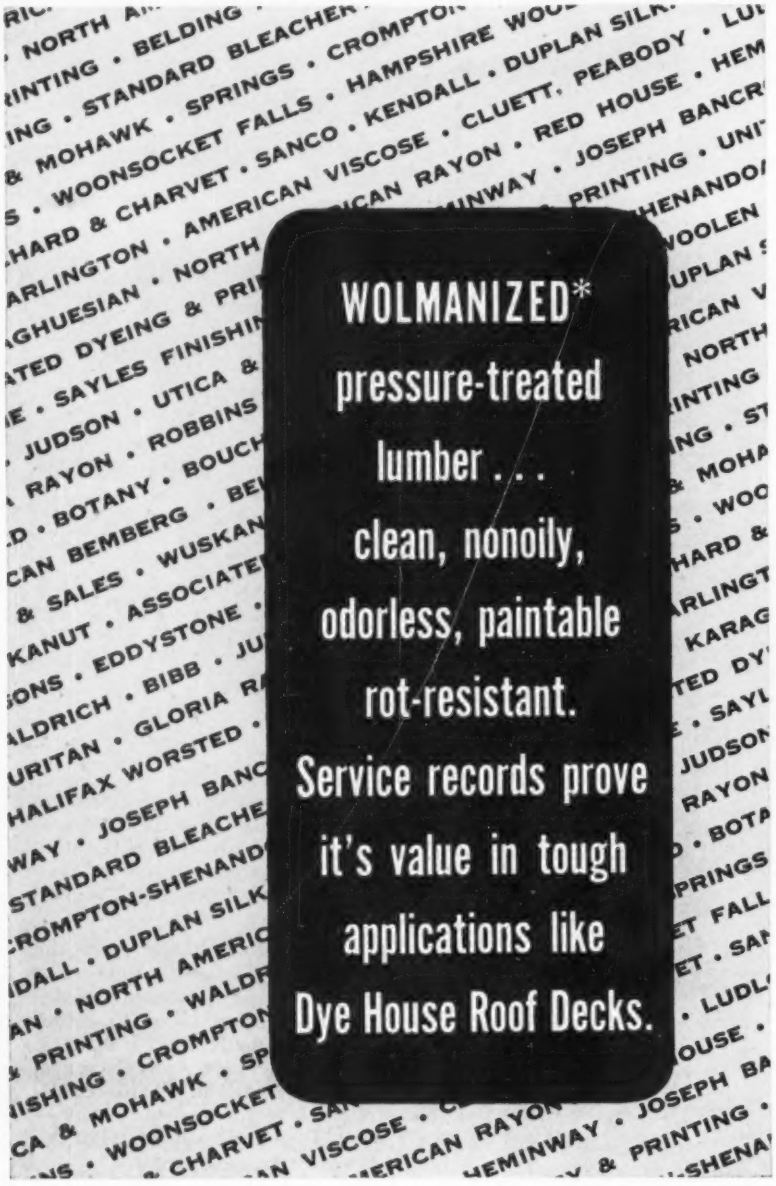

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treatment of specific items that are involved in agreements and negotiations. In each discussion the author points out the loosely defined words that can cause trouble and the generally understood meanings of such things as management's rights.

After reading this book, you will know more about the subjects that cause trouble and why. For instance, wage settlements are generally dictated by the economic pressure that can be brought to bear by each party.

The specific problems of the textile industry are not separately covered, but the general problems of negotiations are the same throughout industry. The strength and weakness of the book is that it sticks to objective analysis and doesn't go into the psychological atmosphere of the bargaining procedure.

Useful Accessories For Textile Mills

▶ To request further information on any item, please use the card in the Reader-Service dept.; refer to the number at the end of the item concerned.

Fire-Retardant Paint

A fire-retardant paint that is said to provide a large degree of fire protection and a sanitary, washable, long-lasting finish has been developed by Fyr-Kote Co., 27th and Douglas St., Omaha, Neb. When exposed to fire, the paint gives off carbon dioxide and calcium chloride, which smother or retard the fire. (U-1)

Make Your Own V-Belts

A V-belt kit for making V-belts of any length is available from Flexible Steel Lacing Co., 4607 Lexington St., Chicago 44, Ill. A kit contains open-end V-belting, fasteners, and tools. It is said to be useful for emergencies. (U-2)

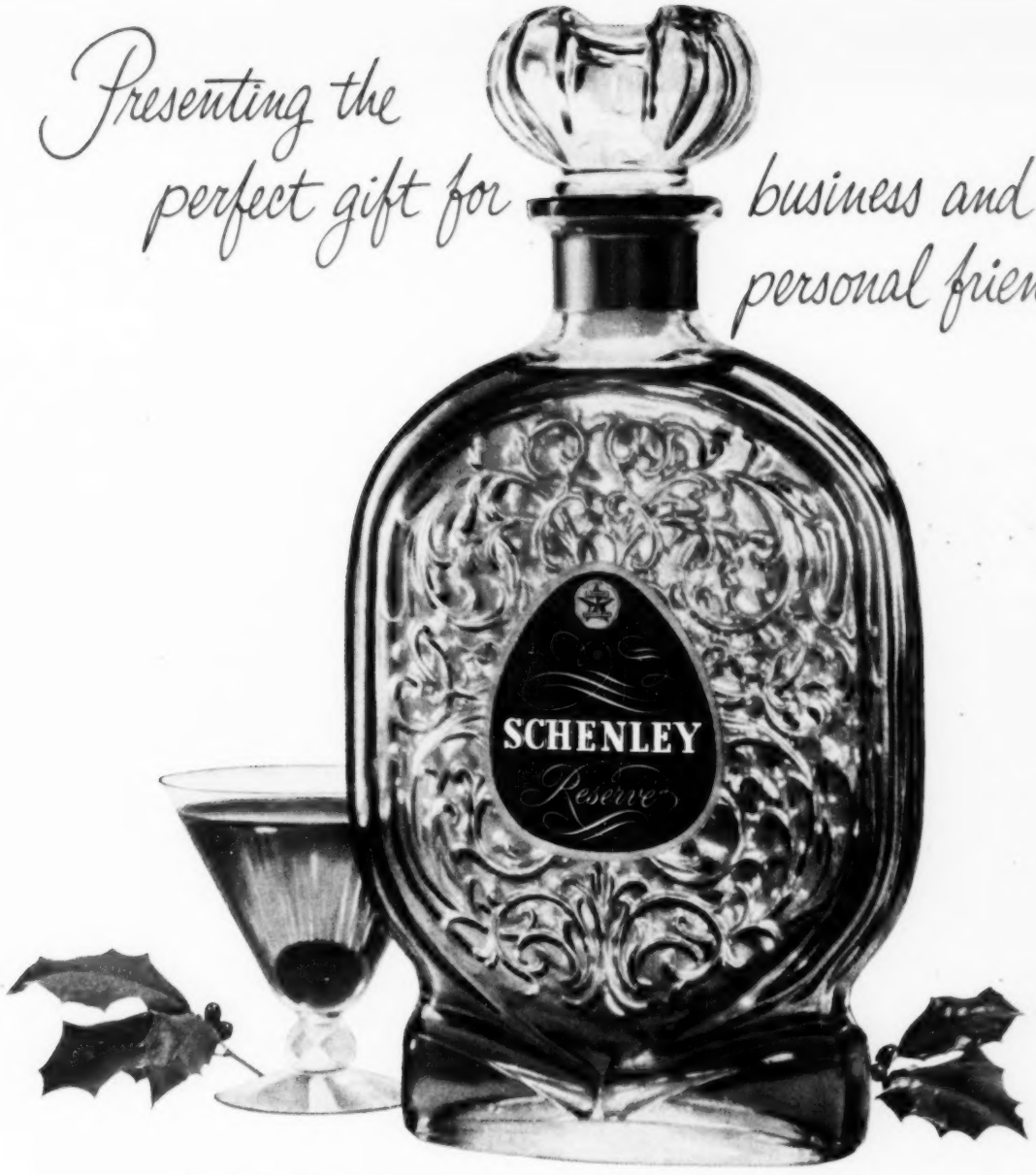
Inserts Improve Cooling Rate

Inserts for cooling rolls and cooling drums that improve the rate of cooling by making the water spiral at high velocities have been announced by F. R. Gross Co., 592 Crestview Ave., Akron 20, Ohio. The inserts can be removed to clean the inside of the roll. (U-3)

Hand-Operated Lifting Truck

A hand-operated hydraulic lifting truck for maintenance work is available from Lewis-Shepard, Watertown, Mass. The truck is available in a 500-lb. model (24x24-in. platform) and a 1,000-lb. model

Presenting the perfect gift for business and personal friends



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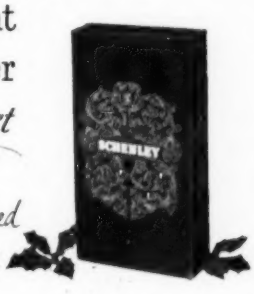
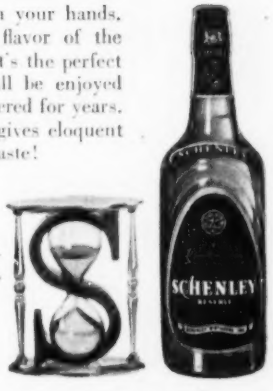
...the best-tasting whiskey in ages
in a crystal-bright
holiday decanter
at no additional cost



Handsomely gift-boxed for convenient giving

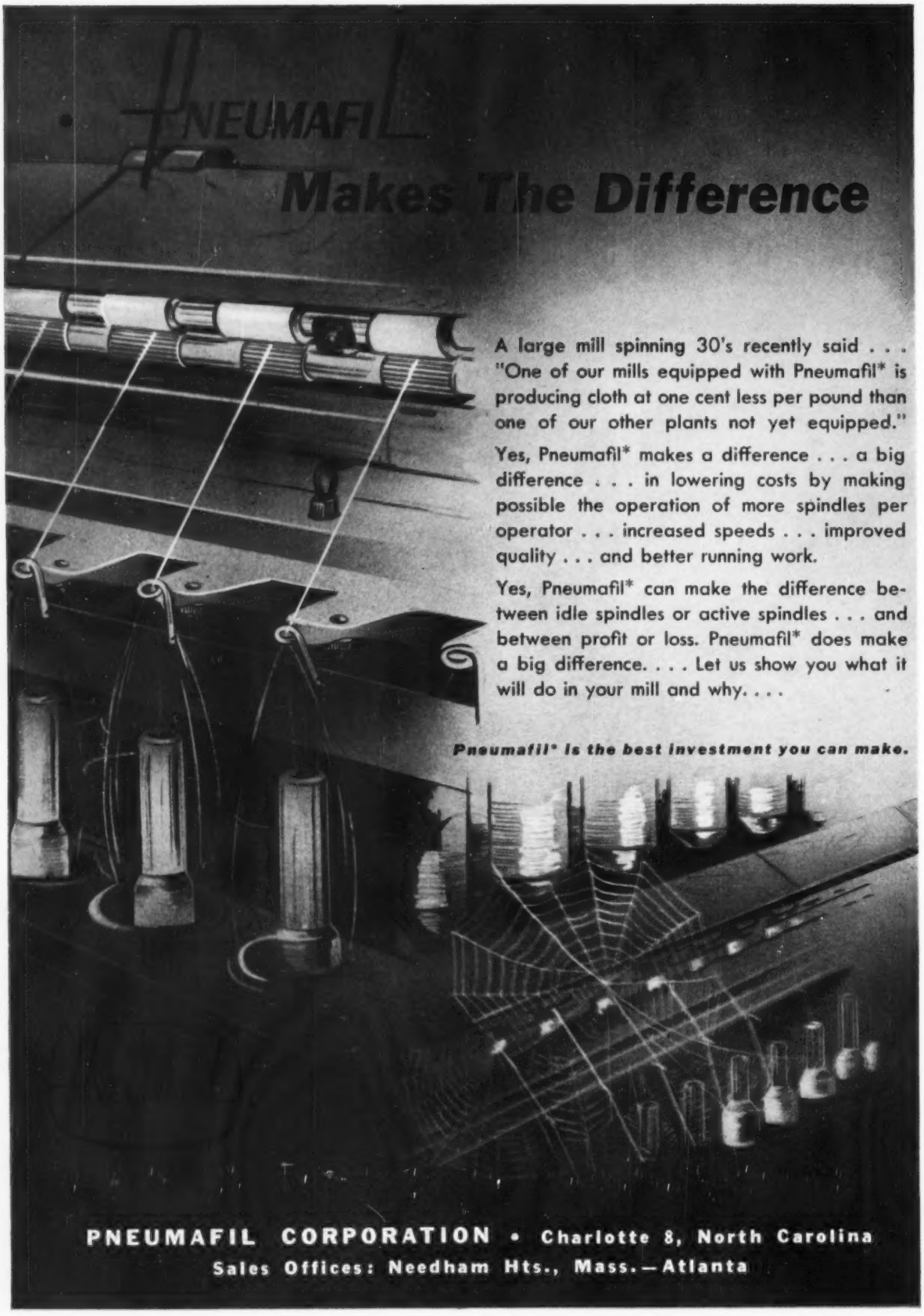
Hold the sleek decanter in your hands. Taste the subtle, satisfying flavor of the superb whiskey. You'll *know* it's the perfect holiday gift . . . one that will be enjoyed and talked about and remembered for years. Give Schenley, the gift that gives eloquent testimony to your own good taste!



The same fine whiskey is available, as always, in the distinctive Schenley round bottle.

BLENDED WHISKEY, 86 PROOF, 65% GRAIN NEUTRAL SPIRITS. ©1953 SCHENLEY DISTRIBUTORS, INC., NEW YORK, N. Y.

PNEUMAFIL Makes The Difference



A large mill spinning 30's recently said . . . "One of our mills equipped with Pneumafil* is producing cloth at one cent less per pound than one of our other plants not yet equipped."

Yes, Pneumafil* makes a difference . . . a big difference . . . in lowering costs by making possible the operation of more spindles per operator . . . increased speeds . . . improved quality . . . and better running work.

Yes, Pneumafil* can make the difference between idle spindles or active spindles . . . and between profit or loss. Pneumafil* does make a big difference. . . . Let us show you what it will do in your mill and why. . . .

Pneumafil* is the best investment you can make.

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Sales Offices: Needham Hts., Mass.—Atlanta

(30x24-in. platform), and 50 cranks raise the platform to a 5-ft. height. (U-4)

New Shadograph Scale

A new scale in the Shadograph line has been announced by The Exact Weight Scale Co., 994 W. Fifth Ave., Columbus 8, Ohio. The new scale has the commodity platter on one side and the counterweight platter on the other side. Five models, 50-, 100-, 200-, 500-, and 1,500-gm. capacities, are available. (U-5)

Firing Control for Burners

A firing control for gas or oil burners has been announced by Combustion Control Corp., 718 Beacon St., Boston 15, Mass. The control gives automatic start-up, operating, and shut-down programing control. If the burner flame goes out, the fuel is cut off inside of 4 secs. (U-6)

Improved Air Valve

An improved solenoid-operated air valve with one moving part has been put on the market by Mechanical Air Controls, Inc., 15311 W. 11-Mile Rd., Detroit 37, Mich. The sealing material is bonded to an aluminum-alloy spool. (U-7)

Welding Alloy for Cast Iron

A new welding rod for sealing cracks in and building up cast iron has been announced by Eutectic Welding Alloys Corp., 40-40 172nd St., Flushing, N. Y. The low-melting-point alloys can be used to build up worn and poorly machined surfaces. (U-8)

Paint for Oven Exteriors

A one-coat aluminum paint for painting the exterior of ovens (over 400° F.) has been announced by Tropical Paint & Oil Co., Cleveland 2, Ohio. The paint will not discolor, blister, flake, or burn off, even at 1,000° F. (U-9)

Sponge Mop

A sponge mop with a self-wringing device is available from Flexy, Inc., New Holstein, Wis. The heavy-duty mop has a 14-in. sponge and a 60-in. handle and can be used on floors, walls, windows, and ceilings. (U-10)

Dyehouse Paint

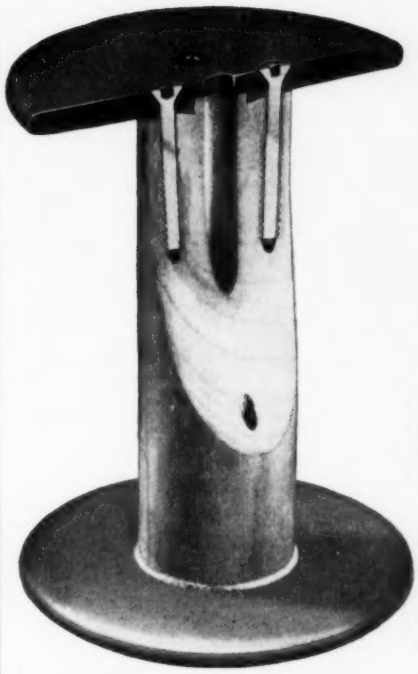
Acid- and alkali-proof maintenance paint for dyehouses is available from Electro Chemical Engineering & Mfg. Co., 750 Broad St., Emmaus, Pa. Vinyl and styrene resins are used in the paint. (U-11)

Paper Wipers

Paper wipers that are highly absorbent, strong, and disposable are available from Scott Paper Co., Chester, Pa. The wipers can be used for hands or machines, and they come in boxes containing 125 wipers, 18 boxes to a case. (U-12)

Tape for Marking Off Areas

A tough pressure-sensitive tape for marking floor areas and overhead limits has been put on the market by Permacel Tape Corp., New Brunswick, N. J. The tape is unaffected by ordinary solvents,



Bobbin sliced to show how the shallow thread non-tapered "anchor" thread screws grip the wood with minimum disturbance of the wood fibers.

LESTERSHIRE WOOD BARREL BOBBIN

WITH REPLACEABLE FIBRE HEADS

• The barrels of these Lestershire bobbins are of hard close grain maple that will not dent, chip, or crush.

• The heads, of hard vulcanized fibre—the most durable material for the purpose—may readily be replaced without damage to the head or barrel.

• The "Anchor Screws" with which the heads are fastened to the barrel are of a patented design that makes a far stronger bobbin. Loosening of the heads under severe conditions is prevented.

These special "anchor thread" screws maintain maximum holding power. The shallow threads do not disturb the grain of the wood as ordinary screws will do.

Four anchor screws hold *three times* better than *eight* drive nails.

LEARN NOW HOW LESTERSHIRE SPECIAL BOBBINS WILL IMPROVE YOUR PRODUCTION!

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Another new development using

B. F. Goodrich Chemical ***raw materials***

B. F. Goodrich Chemical Company does not make this denim. We supply the Hycar latex only.

Corralled-upgrading idea for denim!

IF you think denim is just good old denim, you're going to whoop it up for denim treated with Hycar latex. A manufacturer was shown how to upgrade his product with Hycar. The result? A revolution in denim!

Not only does *Hycar*-sized denim wear much longer because of improved abrasion resistance, but it actually has a better hand that will not change even after many washings. Pastel shades are now available because Hycar sizes the warp yarns, retaining the color permanently. You can even have the old standard blue denim trimmed with white—color-fast too!

Now denim has gone beyond work clothes into a new market for sports garments, and sales have doubled and trebled. Hycar has a way of giving products a sales lift!

Hycar rubber in its many forms not only resists abrasion, but also heat and cold, oil, gas, aging and many chemicals. And there's a wide variety of Hycar compounds with uses in many industries, from petroleum and printing to paper and textiles.

Perhaps a Hycar rubber compound is just what you need to improve or develop a product—to open new sales fields. We'll help with technical advice. Just write Dept. TK-4, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ontario.

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Hycar
Reg. U.S. Pat. Off.
American Rubber

GEON polyvinyl materials • HYCAR American rubber • GOOD-RITE chemicals and plasticizers • HARMON colors

acids, grease, or alkalis. It is available in any width in white, red, or yellow. (U-13)

4,000-Lb. Fork Truck

A new 4,000-lb.-capacity fork lift truck is in production at Mobilift Corp., 409 S. W. 13th Ave., Portland 5, Ore. A 6-cylinder Chrysler engine powers the truck; forward-reverse movement is controlled by a push-pull lever. (U-14)

Electric-Truck Power Unit

A new power unit that opens up like a book for easy servicing is available for the electric trucks manufactured by The Raymond Corp., Greene, N. Y. For instance, the complete turret drive can be changed in 30 mins. (U-15)

Chemical-Resistant Pipe

Chemical-resistant pipes and fittings made of rigid polyvinyl chloride are available from Atlas Mineral Products Co., Houston 1, Tex. The pipe is available in sizes from ½ to 4 ins. Molded fittings are available for pipe up to 2 ins., and fabricated fittings are available for the larger pipe. (U-16)

Copying Machine

A small copying machine for copying any kind of written, typed, or printed material is available from Ozalid Div., General Aniline & Film Corp., Johnson City, N. Y. Up to 200 copies can be made in an hour. Cost: $35. (U-17)

Start-Stop A.C. Brake

A new a.c. brake that is applicable to machine tools and other start-stop machines has been announced by Westinghouse Electric Corp., 401 Liberty Ave., Pittsburgh 30, Pa. The new brake features a single adjustment for torque and shoe clearance. (U-18)

Valve for Pneumatic Equipment

A wobble-rod valve for pneumatically operated equipment has been put on the market by Pantex Mfg. Co., 521 Roosevelt Ave., Pawtucket, R. I. The wobble-rod valve permits direct linkage to rotating, oscillating, toggle, lever, slot, or straight-thrust mechanisms. (U-19)

Color 35-Mm. Film

Industrial engineers might have use for the new high-speed 35-mm. film that is available in color or black and white from Embassy Photo Products, Inc., 6411 Hollywood Blvd., Hollywood 28, Calif. The fast action of the color film makes it applicable to industrial film making. (U-20)

Pallet Dolly

A pallet dolly that rolls and steers over any kind of floor without swivel casters has been brought out by Roll Rite Corp., 801 Jefferson St., Oakland 7, Calif. The dolly has 24 6-in. wheels to support the load and provide surface contact on rough surfaces. Standard sizes: 30x40 and 40x48 ins. (U-21)

Sealer for Concrete Floors

A sealer for newly laid and repaired

TEXTILE BANKING COMPANY

Inc.

Factoring Service

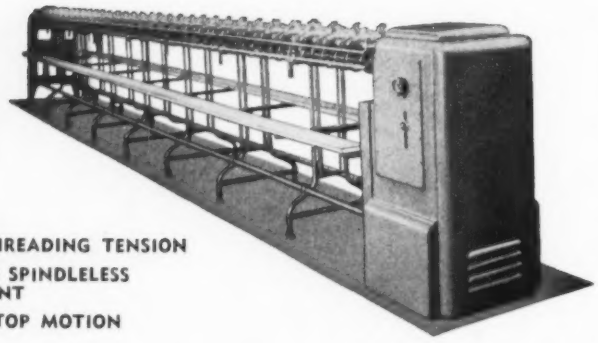
Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

55 MADISON AVENUE • NEW YORK

For Perfect Spools at Higher Speeds

SIPP-EASTWOOD

WINDER-REDRAW



IT'S A SIPP EASTWOOD

- WITH SELF-THREADING TENSION
- SELF-OPENING SPINDLELESS ATTACHMENT
- FILL SPOOL STOP MOTION

Deliberately designed for perfect spools at higher speeds and greatest possible automatic operation. This brand new winder-redraw requires a minimum of attention during operation and is easy to clean and maintain.

FEATURES:

1. Washer type self-threading tension fastened to traverse rail is easily adjustable and quickly cleaned. Eliminates all threading operations.
2. Gate type tensions available with self-threading Alsimag guides for nylon.
3. Full spool stop motion prevents overrun bobbins.
4. The drive and traverse mechanism is enclosed in one complete unit and is lubricated by a circulating oil bath.
5. Traverse adjustment is independent on each side of machine and can be adjusted from 3½" to 7" traverse without changing cam.
6. Speed changes are readily accomplished through the use of a handwheel.
7. Winds per stroke easily adjustable.
8. Single or double drive self-opening spindleless brackets are available.
9. Easily changed for "S" or "Z" twist by use of a reversing switch.
10. Tachometer available for easy speed readings.

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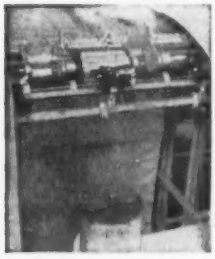
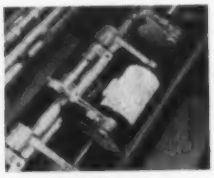
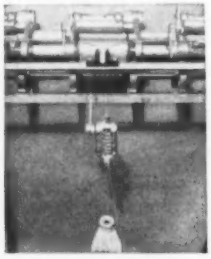


Self-Threading Tension



Full Spool Stop Motion



Gate Type Tension

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DOMESTIC AGENTS:

J. S. FALLOW & CO., 4846 Sherbrooke St. West, Montreal, Canada

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concrete floors is available from West Disinfecting Co., Long Island City, N. Y. A floor can be put to use sooner if the sealer is used. A gallon covers 400 to 600 sq. ft. (U-22)

Tester for Electrical Relays

A new-model high-current tester for checking overload relays, circuit breakers, and other protective devices is available from Multi-Amp Corp., Harrison, N. J. The new model has a built-in ammeter that covers the output range of the tester in six stages: 0 to 10 to 25 to 100 to 250 to 500 to 1000 amps. (U-23)

Electric Tape Dispenser

An electric tape dispenser with a dial to select the tape length (up to 39 ins.) has been put on the market by Gummed Tape & Devices Co., 1069 Rogers Ave., Brooklyn 26, N. Y. The dispenser operates from a 110-v. a.c. outlet and sells for $178. (U-24)

Storage-Battery Cell Puller

A tool for pulling cells out of storage batteries has been developed by Gould-National Batteries, Inc., Trenton, N. J. The tool has a U-shaped steel loop connected to a hexagonal steel nut. A pair of tools are connected to the lead posts, a piece of wood is put inside the loops to form a bridge, and the cell is pulled out by a chain or rope. (U-25)

Warm-Air Space Heater

An oil-fired warm-air space heater for warehouses, etc. has been added to its line of heaters by Dravo Corp., Dravo Building, Pittsburgh 22, Pa. Two models are available—200,000 and 250,000 Btus. per hr. The heater operates on a 110-v. circuit and burns up to No. 2 fuel oil. (U-26)

Noncorrosive Valves

Needle and globe valves made of unplasticized polyvinyl chloride are available from H. N. Hartwell and Son, Inc., Boston, Mass. The valves are used with pipes and fittings made of the same material to handle corrosive liquids. The valves are available in nine standard sizes from ⅛ to 2 ins. (U-27)

Pointers for Supervisors

(*Continued from page 153*)

in some departments the communications involving work problems are carried on between worker and assistant foreman while the communications involving employee "rights" are between worker and foreman.

If such a situation exists in a department—and is considered a desirable condition—the foreman's effective span of control must be established at two levels. How many assistant foremen can he handle? How many rank-and-file employees can he handle? If certain matters of control

VICTOR
Mill Starch

KEESTAR PRODUCTS

the Weaver's Friend

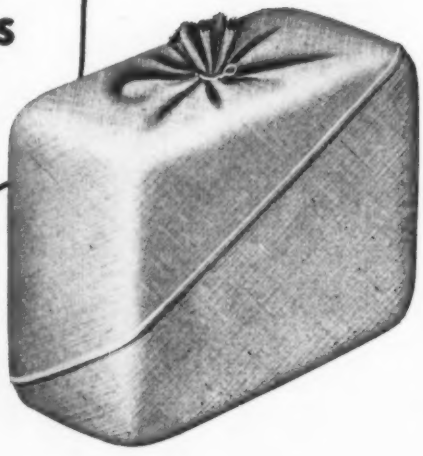
Always Uniform...and Backed by Keever Service

TEXTILE SALES DIVISION
1200 S. C. NATIONAL BANK BLDG.
GREENVILLE, SOUTH CAROLINA
Charles C. Switzer, Vice President

THE KEEVER STARCH CO. ★ GENERAL OFFICES ★ COLUMBUS 15, OHIO
Corn, wheat and other grain products for industry since 1898

3-2

Labor cut from 2 hours to 10 minutes



with

Bemis Tite-Fit Tubing!

Maybe you can cut your wrapping labor costs the way this New York City textile company did. After a demonstration of Tite-Fit Tubing—the spiral-sewn burlap shipping tubing with 2-way stretch—the manager said, "Last evening it took two men over two hours, using flat yardage, to hand-sew and steel-strap two units that you have covered in ten minutes."

Now, of course, Tite-Fit Tubing has taken over the job in that plant . . . and labor costs have tumbled. Ask the Bemis Man to demonstrate to you.

All burlap alike? Not by a jugful!

There are various grades of burlap and, of course, variations within those grades.

But there's one sure way to get the quality of burlap you pay for: *Rely on Bemis.**

You can always look to Bemis for the best in burlap!

**Producers and users alike accept Bemis' grading of Indian burlap as the standard for the industry.*

Bemis BEMIS BRO. BAG COMPANY

General Offices
St. Louis 2, Mo.

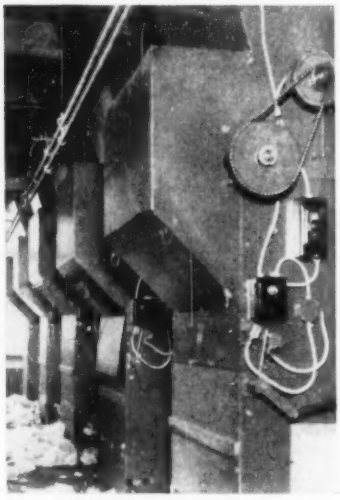
over employees are left directly in his hands, then he must have the time and opportunity for adequate communication with the employees. Otherwise, the control functions he is expected to exercise directly will not be carried out effectively. The more control functions he performs himself, the fewer employees he can supervise because of the necessity for contacts with employees.

Yarn Production

(*Continued from page 108*)

Mass. The F-5 component has a maximum roll spread of 9 ins. and will handle most worsted and synthetic fibers and blends. Diameters of the rolls are: front top roll, $1\frac{7}{8}$ ins.; middle top roll, $1\frac{3}{4}$ ins.; back top roll, $1\frac{7}{8}$ ins.; front steel roll, $1\frac{1}{16}$ ins.; apron roll, $1\frac{7}{16}$ ins.; middle bottom roll, $1\frac{3}{4}$ ins.; and back bottom roll, $1\frac{1}{8}$ ins. The drafting element has a gear-driven middle roll and an apron that passes over an apron bar and bottom roll.

(N-41)



Improved Chute Controls Wool to Bramwell Feeders

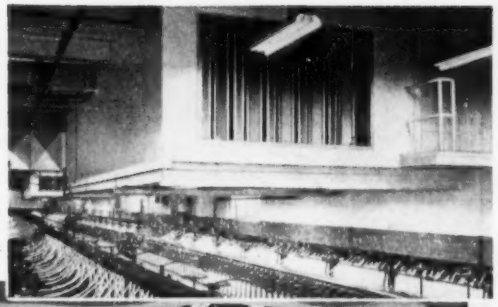
Automatic chute-delivery units of improved design for use in conjunction with Bramwell woolen-card feeders have been developed by George S. Harwood & Son, 50 Lagrange St., Worcester 8, Mass. The company builds the chutes to meet individual mill dimensions and specifications.

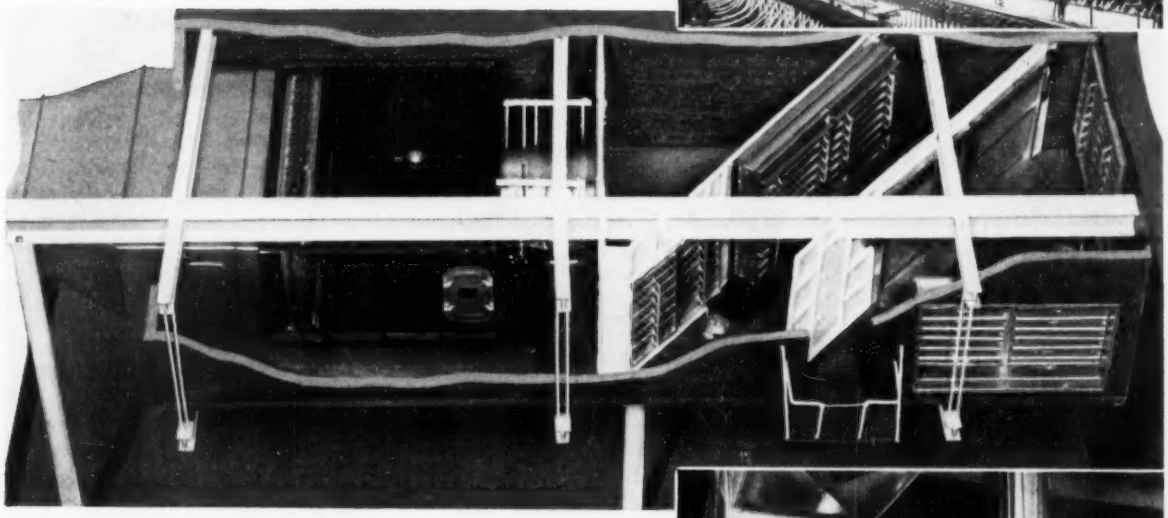
(N-42)

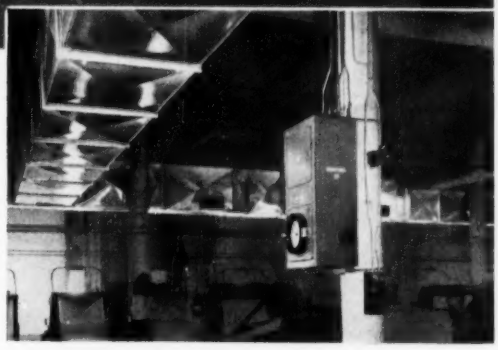
Suction Frame Cleaner Uses Minimum of Power

The Thoma cleaner, a Swiss-made pneumatic cleaner for ring spinning frames that is said to need one-third to one-half less power to operate compared with other

BORDEN MILLS AIR-CONDITIONED BY BAHNSON







Directly above: Typical design of the 28 Centrispray Stations. Nearly 2,000 tons of refrigeration are required. Upper right: Suspended Centrispray Station in Roving Room, leaving floor clear for regular mill operations. Lower right: Ductwork and control box in Cloth Room.

Centrispray Washers handle over a million cubic feet of air per minute for Humidity and Temperature Control

The mammoth 4-story Kingsport plant of Borden Mills presented many technical problems—yet Bahnson Engineers had the know-how that provided the answers. The biggest problem—apparatus space—was solved by suspending many of the light, efficient Centrispray Washers, and by locating others in the existing monitor. This eliminated the need for expensive apparatus houses.

Air-conditioning equipment, for this most modern complete system in the Textile Industry, was *designed*, *manufactured* and *installed* by Bahnson—leader in textile air conditioning.

Get the full story of the Centrispray Air Washer for modern textile air conditioning. Write for Catalog 22A.

91 OF THE TOP 100

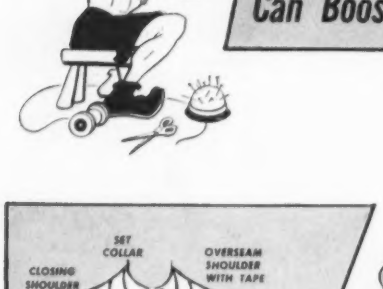
Of the 100 top textile firms in the nation, 91 are users of Bahnson equipment.

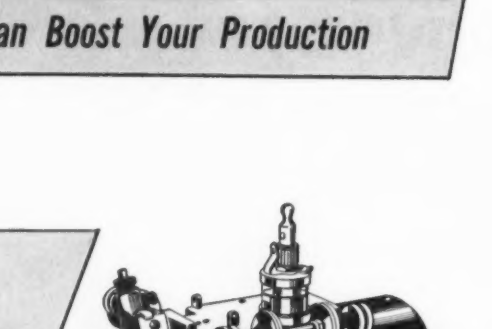
Bahnson Company

ENGINEERS AND MANUFACTURERS

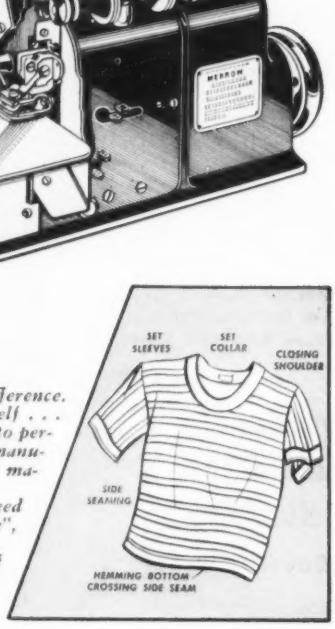
WINSTON-SALEM, N. C.

Mr. Outerwear Manufacturer:
MERROW CLASS A MACHINES
Can Boost Your Production





It's their versatility that makes the difference. "Merrows" don't collect dust on the shelf . . . their flexibility enables the same machine to perform a variety of operations. To you as a manufacturer this means higher production per machinery dollar invested.
Simplicity and rugged design of high speed Merrow Machines mean minimum "down time", provide you with a bonus in production.
We will be glad to demonstrate the work of these machines on your own garments.



In outerwear manufacturing, Merrow Class A Machines are extensively used on: polo shirts, sportswear, children's and infants' wear, bathing suits, sweaters, trousers and knit dresses. They are used on a wide variety of materials, including woven fabrics, knit fabrics of various construction, cotton, wool, rayon, nylon and other synthetics.
Applications of Merrow Machines include overseaming, hemming, overedging, serging, crochet and shell stitch edge finishing and shirring. Guides are available for attaching tape, cord, elastic, lace, borders, collarettes or rib material.

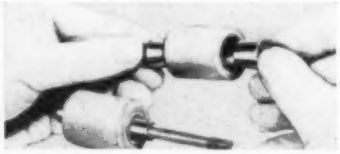
WRITE FOR FREE ILLUSTRATED BULLETIN.

TRADE MARK REG
The **MERROW**
MACHINE COMPANY
ESTABLISHED 1838 INCORPORATED 1896
2803 LAUREL STREET • HARTFORD • CONN.

types, has been made available for American-mill installations by Stellite American Corp., 60 E. 42nd St., New York 17, N. Y.

The pneumatic frame cleaner is designed for use on all types of frames and with practically all kinds of fibers.

(N-43)



Ball-Bearing Top Rolls Are Easy To Disassemble

Ball-bearing top rolls with four easily interchangeable components per unit are now available from Faultless Caster Corp., 1521 N. Garvin St., Evansville 7, Ind.

Other advantages of the simplified-construction rolls are (1) low maintenance cost, (2) elimination of oiling at the frame, (3) no high starting friction, (4) no lapping of lint on the journals, (5) almost no roll picking, and (6) no wear on cap bars and saddles.

(N-44)

Spindle Adapter for Paper Tubes

A spindle adapter that allows modern bearing spindles to be substituted for the old blades has been developed by Hartford Machine Screw Co., Box 1440, Hartford, Conn.

With the spindle adapter, a mill can convert spinning, twisting, or special-duty spindles from wood-bobbin service to service with paper or plastic tubes, regardless of the make of spindle now in use.

(N-45)

Twisting, Winding, etc.

(*Continued from page 113*)

greatest on the slots because the twister drive bar chews out the slots; so the double slot should extend the life of the bobbin. The improved bobbins also have a new baked-enamel wrinkle finish.

(N-75)

Crescent-Shaped Creel Gives Even Warping Tension

A crescent-shaped creel, available in North America from Crowther Ltd., 637 Craig St., W., Montreal, P. Q., Canada, has a capacity of 260 cones, 10 cones in a row vertically. The front section of the creel contains the combined tension and stop motions, each vertical row having an indicating signal light on top.

During creeling, the front framework can be moved away from the rear framework that holds the cones with a con-

Need a high capacity bearing that's compact?

here's how leading chain saw manufacturers get it with NEEDLE BEARINGS

Leading manufacturers of chain saws rely on Torrington Needle Bearings because of their high capacity and their small size.

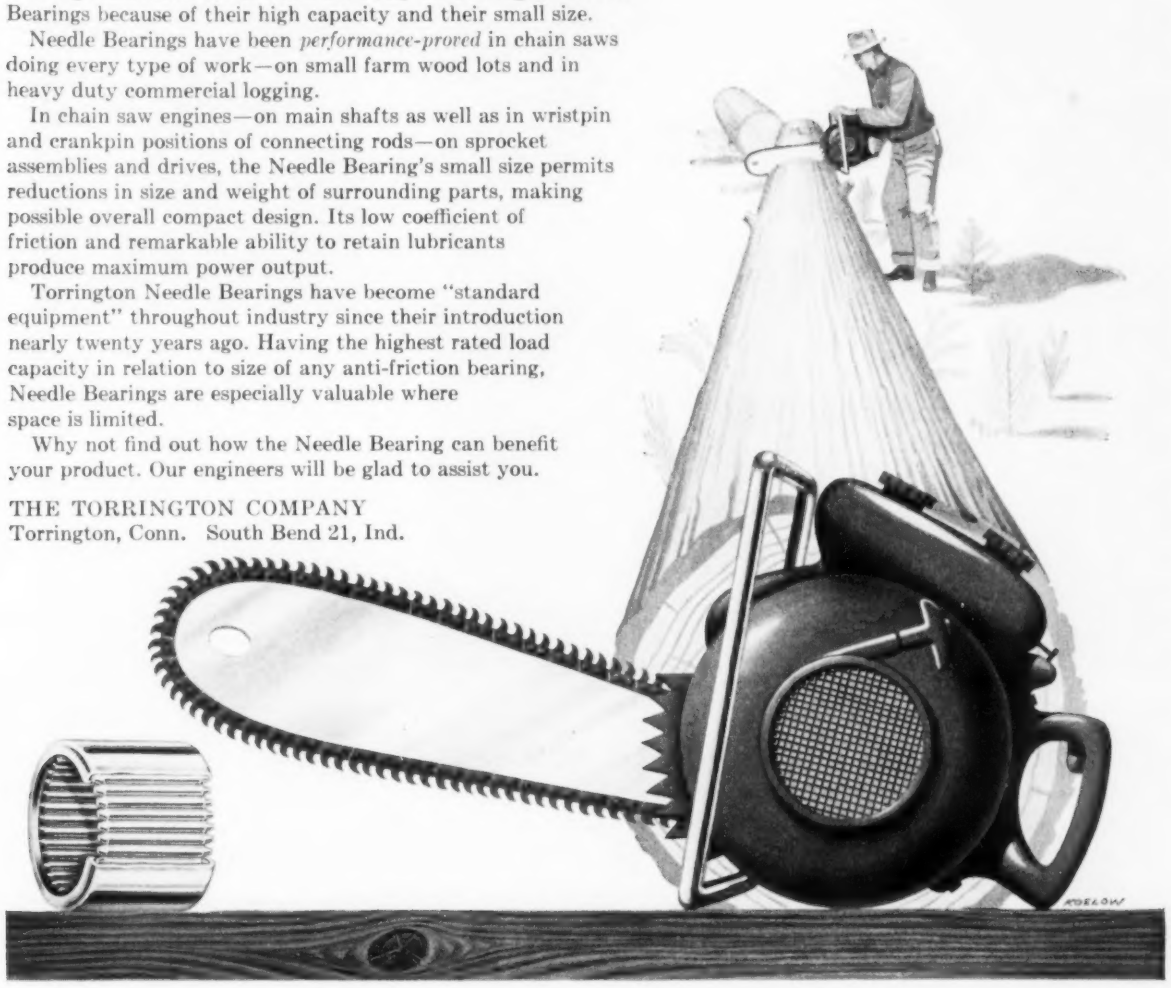
Needle Bearings have been *performance-proved* in chain saws doing every type of work—on small farm wood lots and in heavy duty commercial logging.

In chain saw engines—on main shafts as well as in wristpin and crankpin positions of connecting rods—on sprocket assemblies and drives, the Needle Bearing's small size permits reductions in size and weight of surrounding parts, making possible overall compact design. Its low coefficient of friction and remarkable ability to retain lubricants produce maximum power output.

Torrington Needle Bearings have become "standard equipment" throughout industry since their introduction nearly twenty years ago. Having the highest rated load capacity in relation to size of any anti-friction bearing, Needle Bearings are especially valuable where space is limited.

Why not find out how the Needle Bearing can benefit your product. Our engineers will be glad to assist you.

THE TORRINGTON COMPANY
Torrington, Conn. South Bend 21, Ind.

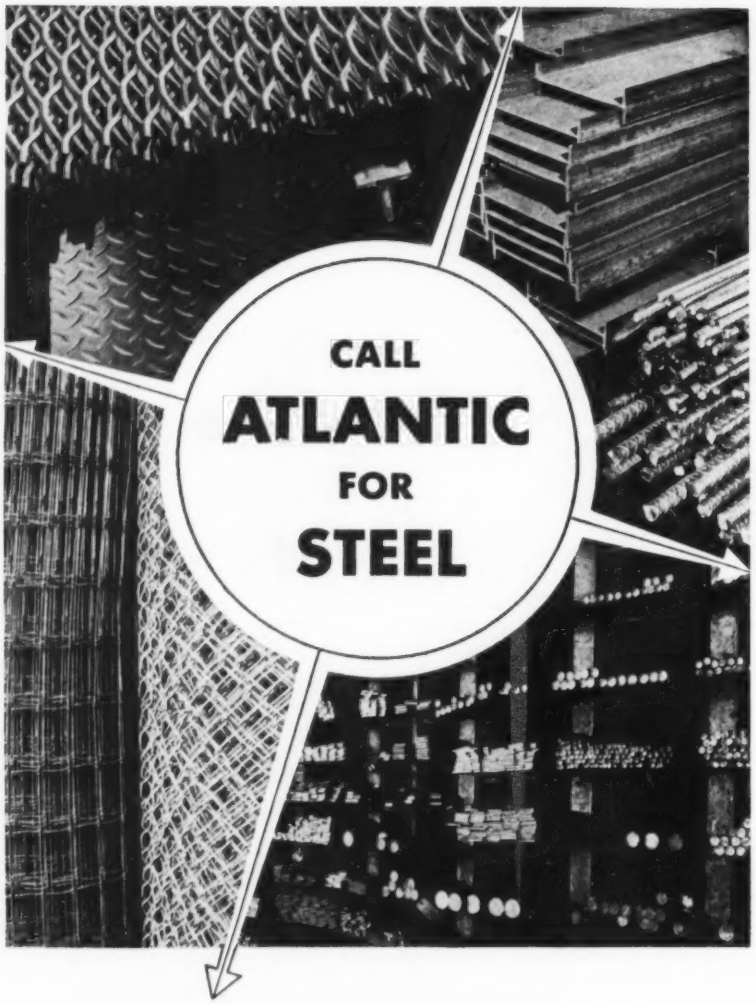


TORRINGTON *NEEDLE* **BEARINGS**

Needle • Spherical Roller • Tapered Roller • Cylindrical Roller • Ball • Needle Rollers

Trade-marks of leading chain saw manufacturers whose products enjoy the benefits of the Needle Bearing.

HOMELITE CORPORATION · Mall · CLINTON · McCULLOCH CHAIN SAWS · POULAN · TITAN CHAIN SAWS · DISSTON · REED-PRENTICE CORP



DIRECT FROM WAREHOUSE TO YOU

FROM our spacious new warehouse, we are making more and faster shipments than ever before to customers throughout the South.

Our warehouse was constructed with *service foremost in mind:* (1) To provide a wider variety of stock items, (2) To make faster deliveries, (3) To furnish a full range of warehouse services—from metallurgical advice to sawing, shearing or flame cutting.

More and more steel users are finding that our service is geared to their needs. Write, wire or telephone when you want steel *in a hurry*—one piece or a carload!

AMERICAN STEEL WAREHOUSE ASSOCIATION — BETTER DISTRIBUTION

"Service in Step With Southern Progress"

WAREHOUSE DIVISION
Atlantic Steel Company
ATLANTA, GEORGIA • EMERSON 3451

venient handle at the back center of the creel. Yarn guides are the self-threading type. Chromium-plated gravity tensions are standard.

(N-76)

Yarn Tensions Controlled With Magnetic Brake

Two new magnetic tension brakes have been developed by General Electric Co., River Rd., Schenectady, N. Y. With torque ranges of 0.4 to 4.0, and 2.0 to 14.0, oz.-ins., the new units supplement the company's original brake of this type that has a pulley and a torque range of 0.1 to 0.5 oz.-ins.

Designed to provide constant yarn tensions during processing and reduce abrasion and excess flexing of yarns, the larger-size brakes are adapted for use on large machines where a constant torque is desirable.

The two brakes are approximately 2 and 3 ins. in diameter and weigh about ¾ and 2¼ lbs. respectively. They have a speed range of 0 to 1,500 rpm.

(N-77)

Size Cooker Prevents Waste

A warp-size pressure cooker (Model K) that acts as a preparation unit and storage

SUPREME'S *two-part pattern for your* KNITTING PROFIT

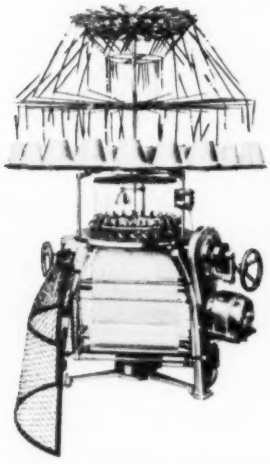
Supreme's pattern for your profit is two-fold . . . providing better knitting performance plus helpful service.

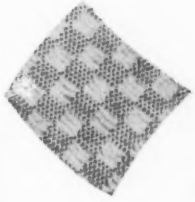
1. By combining multi-fabric versatility with super-speed production and low maintenance, Supreme machines assure you of maximum profit operation.
2. In addition, with every Supreme, you can get individual help on machine set-up, operation and maintenance, patterning, mill planning, etc.

Write for further information on any of the Supreme machines shown on this page.

PROFIT-KNITTING MACHINERY

For Example — Supreme's LRP





Supreme's new wonder-machine model LRP vent-knits open-stitch areas in a plain jersey background—produces air-cooled, run-resistant and elastic fabrics in a variety of beautiful patterns. This amazing machine profit-knits at rates up to 28 yards per hour—rayon, cotton or other yarn combinations may be used—perfect for summer and underwear fabrics.

HELPFUL SERVICE

Supreme follows through sales with service. Whenever required, Supreme's technicians provide individual assistance to the knitter to help him get maximum successful results from his Supreme machines. Pattern planning and analysis, engineering and maintenance information, in-the-mill instruction for knitter mechanics, mill-planning guidance are regular features of Supreme's service.

Here's a Free Sample of Supreme's Policy of Service —SUPREME'S NEW FABRIC and MACHINE SELECTOR— Slide rule chart identifies fabrics produced on each Supreme model. Includes actual fabric swatches. Gives diameter, feeds, needles per inch and production rates. Write for your free copy.

SUPREME
KNITTING MACHINE CO., INC.
94-02 104th STREET, OZONE PARK 16, N. Y.
Southern Representative and Showroom:
The Malluck Co., 711 S. Tryon St., Charlotte, N. C.

SK-169

With labor costs as they are, the fast, *mechanized* TENNANT System can save you more *today* than ever—besides eliminating scrubbing. Here are 5 reasons why TENNANT "dry cleaned" floors are cleaner . . . brighter . . . safer—yet *cost you less:*

1 **Requires less manhours** for floor maintenance because floors can be cleaned *faster* . . . stay clean longer. Unlike rough, dirt-catching scrubbed floors, Tennant-cleaned floors are smooth, hard, dirt-resistant . . . clean up like magic! Saves time and expense.

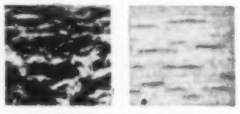
2 **Makes floors easy to clean.** Fast, low-cost "dry cleaning" with a Tennant Machine keeps floors bright, durable. Only daily care is dry mop sweeping.

3 **Cuts accident costs.** Helps keep floors DRY and safe. Aids morale.

4 **Makes floors last longer** by protecting against dampness, decay and wear.

5 **Helps prevent losses** of yarn and cloth from splinter-snags and dirt.

Write Today! Learn how mechanized "dry cleaning" can save you money. Ask for new bulletin "HOW TO GET BETTER RESULTS IN TEXTILE FLOOR MAINTENANCE."



HERE'S WHAT HAPPENS when you stop scrubbing your floors and switch to economical Tennant "dry cleaning."

Microphoto at left shows typical surface of a scrubbed floor. Note how water has broken down top wood structure and caused rough, jagged, dirt-catching splinters. This makes floor hard to clean; and it breaks down rapidly under heavy traffic.

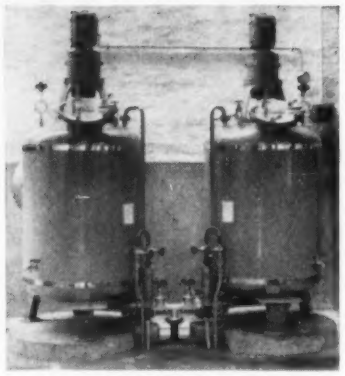
In contrast, microphoto of a Tennant "dry cleaned" floor (right) shows how the bright, smooth, protectively sealed floor resists dirt and wear . . . and is easily cleaned with minimum manpower.

G. H. TENNANT CO.
2586 North Second Street
Minneapolis 11, Minnesota

The way to finer floors
TENNANT
Floor Maintenance System

ESTABLISHED 1870

OFFICES IN PRINCIPAL CITIES

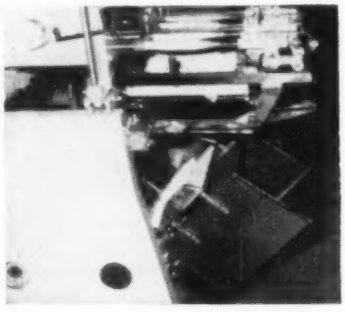


vessel is being made by Ruti Machine Works Ltd., Zurich, Switzerland. The cooker is said to prevent deterioration of the prepared size.

After water, starch, and other ingredients have been mixed by the rapidly moving agitator, the lid is closed and steam is let in through the bottom of the cooker. From this moment on, the size liquid is under steam pressure. Since the size does not come into contact with air, crust formation is eliminated.

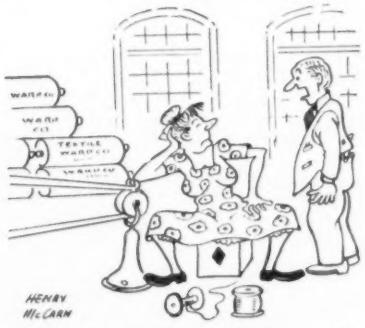
Because of the insulation around the container, heat loss is cut to a minimum; so the liquid is kept warm for a long time.

(N-78)



Bobbins Drop Onto Pinboards

Newest refinement of the Foster-Muschamp Autofill winder is a device that



"When do you start your vacation, Lucy? Officially, I mean."

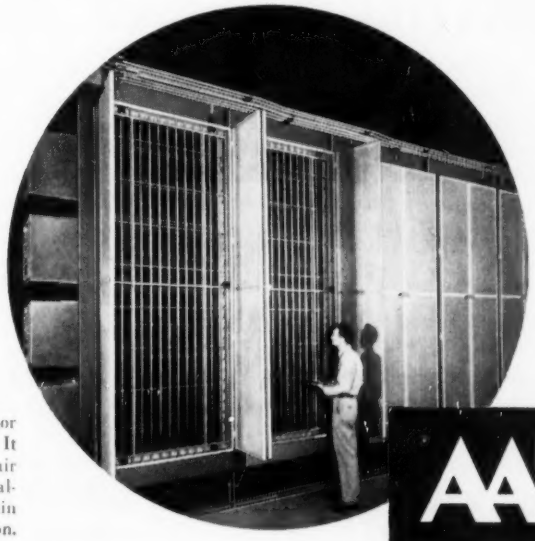
Clean Air MAKES THESE MORE BEAUTIFUL

The country's largest hosiery manufacturers use AAF ELECTRO-MATIC precipitators to positively eliminate airborne dust and smoke in the precision manufacture of full-fashion hosiery.

The finished products are more perfect. The number of rejects is cut to a minimum. And the delicate automatic knitting machinery is protected against costly breakdown and unnecessary wear.

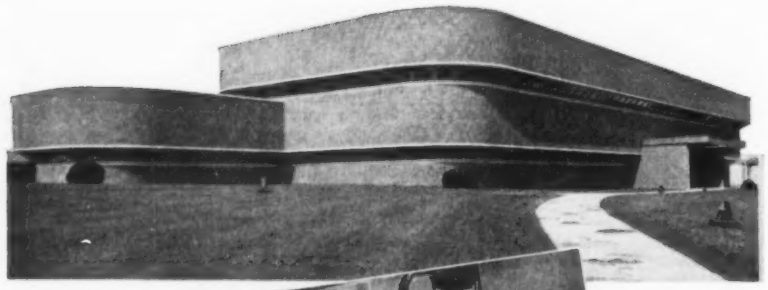
American Air Filter
COMPANY, INC.

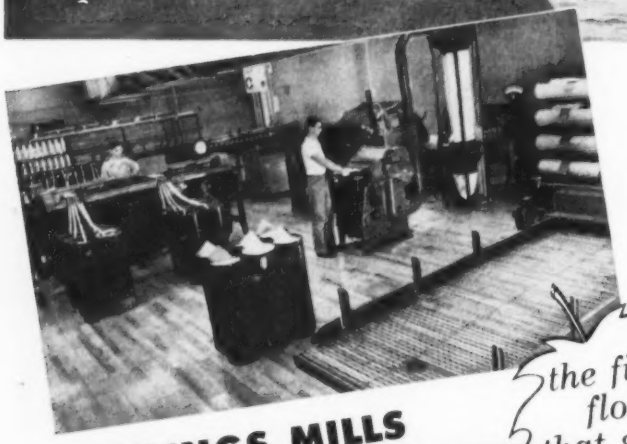
304 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.



The ELECTRO-MATIC precipitator even removes smoke from the air. It assures a positive, constant clean air volume and cuts maintenance to almost zero. Please write for Bulletin No. 250 for additional information.

AAF





for SPRINGS MILLS

the finest floor that grows

foot-friendly

NORTHERN HARD MAPLE

You'd expect the new Springs Mills office building and laboratory to be truly *modern*—and it is. And quite as modern as its exterior design, its air-conditioning, its fine testing and production equipment and its unique custom furniture, are its floors—of *forever-modern* **MFMA** Northern Hard Maple. They're splendid, enduring floors, tight and bright and crevice-free, resilient, easy to maintain and *easy on the feet*. That's important. Foot-friendly maple floors cut down fatigue . . . which cuts down errors . . . which makes business better and more profitable. Springs Mills architect was Roberts & Co. Associates, Atlanta. Ask *your* architect, or see Sweet's (Arch. 12 K-MA). Write for New Flooring Textbook.

MAPLE FLOORING MANUFACTURERS ASSOCIATION

Suite 592, Pure Oil Building, 35 East Wacker Drive • Chicago 1, Illinois

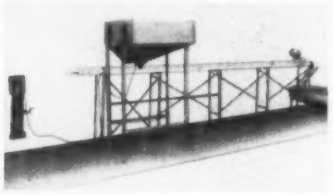
FLOOR WITH *NORTHERN* HARD MAPLE

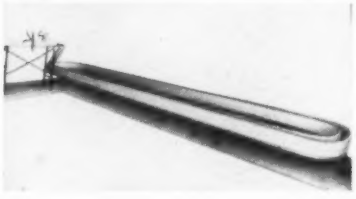
BEECH AND BIRCH

automatically loads filling bobbins directly onto pinboards, ready for storage or for transfer to the weave room. The boards are available from Foster Machine Co., Westfield, Mass.

Bobbins are deposited individually on pinboards that handle 48 quills. As each board is filled, it travels to the rear of the machine, where it can be collected or placed on a conveyor belt for automatic removal. Each group of four spindles can take care of a different count and color.

(N-79)





Conveyor for Bobbin Feeding

A closed conveying system for continuously or intermittently feeding bobbins to automatic spoolers or other machines has been developed by Sunray Co., Box 445, Spartanburg, S. C. A steel hopper vibrates at a controlled intensity and eliminates tangled bobbins and controls the number of bobbins discharged per minute. The oval-shaped conveyor belt goes around the automatic spooler, and the belt is flexible enough to go around the curves without buckling, yet tough enough to hold the bobbin load without dragging. The absence of joints prevents yarn hang-ups.

(N-80)

Weaving

(*Continued from page 116*)

automatically, depending on the type of yarn. The warp-tying machine (bottom) knots 200 to 300 knots per minute. Stationary and portable models are made.

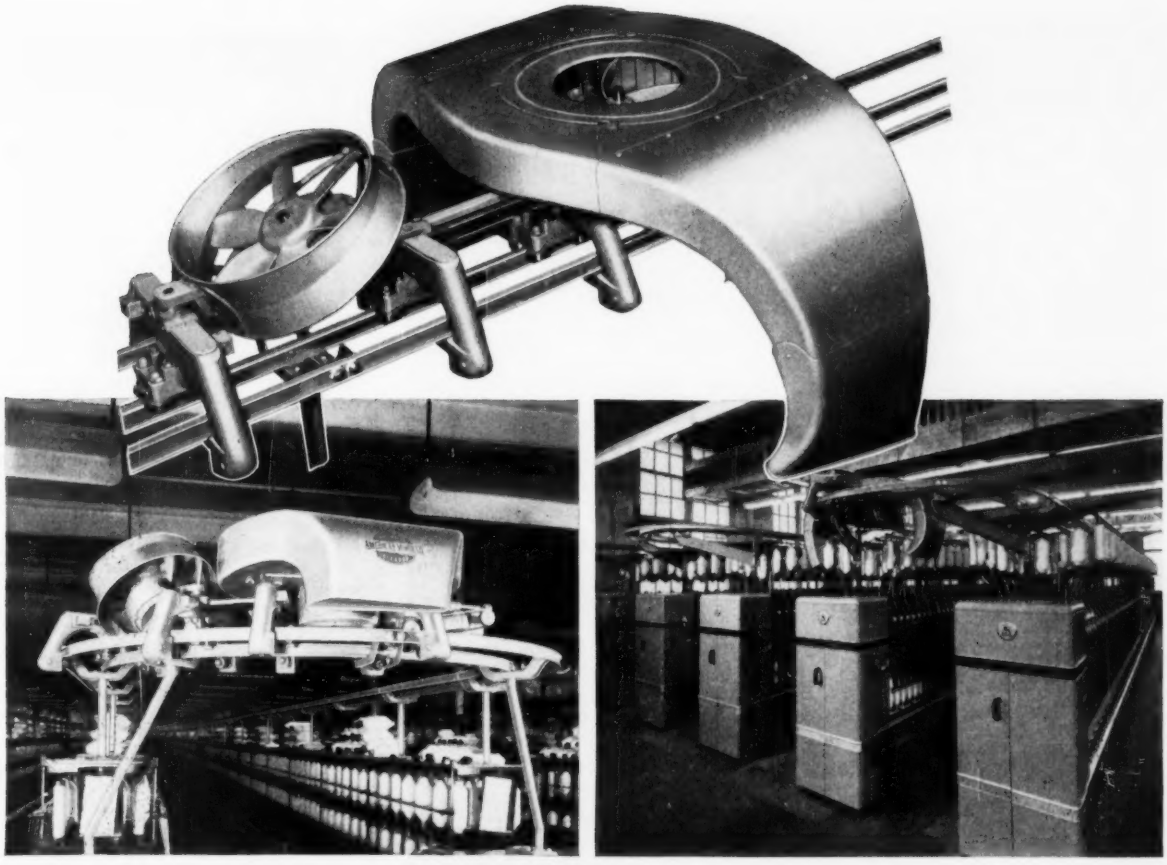
(N-96)

Front Box Plates in Chrome

Front box plates for L- and XL-model looms are being finished in chrome plate by Greensboro Loom Reed Co., Inc., Greensboro, N. C.

The manufacturer claims that the box fronts will eliminate the cost of covering materials, reduce jerked-in filling, and reduce shuttle costs.

(N-97)



"no manual cleaning . . .

on high speed frames spinning low count waste yarns"

This is a report from a mill operator who recently completed installation of American Tri-Rail Cleaners over SG-1 spinning frames.

In addition to low maintenance cost, there are many other advantages of American Tri-Rail Cleaners.

SEND FOR BULLETIN TR-1

Advantages:

- STABILIZED TRAVEL
- SMOOTH REVERSE
- BETTER CEILING CLEANING
- LOWER HEADROOM
- HIGHER SPEED
- GREATER AIR VOLUME
- HIGHER VELOCITY
- NO CONDUCTORS OR COLLECTORS
- BETTER CREEL CLEANING

AND CREEL MOUNTED CLEANING IS AVAILABLE FOR ANY TYPE OF FRAME.

AMERICAN OVERHEAD HANDLING EQUIPMENT

MONORAIL COMPANY

13108 ATHENS AVENUE • CLEVELAND 7, OHIO

LET AN AMERICAN MONORAIL ENGINEER GIVE YOU ALL THE FACTS ON SAVINGS AND ADVANTAGES OF TRI-RAIL CLEANING.

 For more information, write direct or use Reader Service post card.

New TOLEDO INDUSTRIAL LINE

These great new Toledos set new standards of fine performance with new clean-line design in handsome gray finish . . . double-pendulum mechanism in one-piece sector design . . . dial can be installed to face any of eight directions; also with full 360° swivel dial.

44 WAYS BETTER

New features in *every* model to serve you better—now added to world-famous accuracy and dependability of Toledo Scales! See them now—complete range of types and capacities to help you *control costs!* Whether it's weighing, checking, testing, counting, batching, force-measuring and other operations . . . there's a new Toledo to do the job with high *accuracy*, *speed* and *dependability*. Write for up-to-date scale information in new condensed catalog No. 2001. Toledo Scale Co., Toledo 1, Ohio.

TOLEDO®
Today more than ever
HEADQUARTERS FOR SCALES
SALES AND SERVICE OFFICES IN 200 CITIES

Air-Suction Unit Prevents Jerked-in Filling

Jerked-in filling is prevented by an air-suction device that keeps the extra filling away from the shuttles on a box loom weaving a multicolor fabric. A nozzle is placed at the selvage near the fell of the cloth to gather in the extra filling; the nozzle and amount of suction are adjustable.

A flexible tubing leads to a pan component mounted on a steel backplate located on the arch under the dobby head on English looms. The pan is driven by a direct-coupled fractional-horsepower motor, which consumes approximately 100 w.

The device was developed by Matthews & Yates Ltd., Manchester, England.

(N-98)

Shank Support and Guide Prolongs Temple Life

A new-type temple stand has been developed by Harrison Loom Improvements, 129 Pierrepont St., Brooklyn 1, N. Y. It has an additional support and guide for the lower end of the temple shank and is designed to allow a worn shank and temple to be used for a much longer time than has been practicable.

(N-99)

Static Eliminator for Looms Prevents Fabric "Fogging"

The Shirley radioactive static eliminator (RASE) developed by the British Cotton Industry Research Assn., is being manufactured by Record Electrical Co. Ltd.,

Broadheath, Altrincham, Cheshire, England. Its purpose is to keep dust and lint away from synthetic fabric overnight or on weekends.

The active element, which is kept in a cup up out of the way when not in use, is radioactive thallium. When it is hanging in position over the warp ends or cloth, it emits beta rays that ionize the surrounding atmosphere sufficiently to render it conductive to static charges. Static generated during weaving is drained off, and dirt in the air is not attracted.

(N-100)

Plastic Vibration Blocks For Draper Looms

A new laminated-plastic vibration block for Draper looms has been successfully subjected to mill tests and is now available from Synthane Corp., Oaks, Pa. The tests indicate that the new block will last 60 times as long as wooden vibration blocks.

The new block is made of L-RF laminate with a filler of a nonwoven random cotton-fiber mat. Its durability eliminates damage to loom parts, especially the whiproll cam and followers, that often occurs when vibrator blocks give way.

The blocks cost six to eight times as much as wooden blocks.

(N-101)

Improvements Made on Glenwood Quill Polisher and Degreaser

An improved model of its machine for refinishing and degreasing loom quills has been bought out by Glenwood Machinery Associates, Inc., 85 Chestnut St., Newark, N. J. The Model C machine has these improvements:

1. A conveyor discharge feeds quills directly to a basket or truck.
2. The unit can be accommodated to different-length quills in a matter of minutes.
3. The machine can be fed from the return conveyor of the Terrell stripper machine as well as from the rails.
4. The machine rejects quills that are badly damaged on the tips.

(N-102)

Shuttleless Loom Inserts 350 Ppm.

A shuttleless loom that blows its picks through a small shed at a speed of 130 ft. per sec. and 350 ppm. and that is said to have only 25% as many parts as an ordinary cotton automatic loom has been developed in Sweden. The inventor is Max Paabo, an Estonian textile technician, and the loom has been named the Maxbo loom. At least 15 such looms are now in use in Sweden.

The filling supply is a single large cone located at the side of the loom. Yarn is drawn off by a cylinder, which is in line with a blowing nozzle that points toward the shed opening at the selvage.

(N-103)

CLARK UTILITRUCS handle the toughest jobs at least cost!

...they're engineered to satisfy driver, maintenance man, management

Here are the most advanced 6000-7000 lb. fork trucks on the market today—Clark's gas or electric UTILITRUCS. Built to handle jobs that break the backs of less rugged trucks, these UTILITRUCS have proved their superiority in foundries, steel mills, stevedoring* and heavy warehousing. They represent an ideal balance of essential engineering features. They get more work done at less cost, for these reasons:

1. Easier to drive

All controls at the driver's fingertips, like an automobile; compact and more maneuverable; shockless steering; increased braking efficiency; 140 sq. inches additional visibility; 25 inches of free-lift; DYNATORK or HYDRATORK DRIVE available on gas model.

2. Easier to service

Complete accessibility for maintenance. On gas model: one-piece "zipper" hood folds back to expose engine; one-piece floorboard lifts up to expose master cylinder and transmission; swing-out battery. All service points easy to reach.

3. Built to take punishment

Welded, integral-unit box frame eliminates distortion; higher inch-pound rating; axle-to-frame mounting absorbs shocks and strains; new design wheel and backing plate seals out dirt and abrasives. Oil bath air cleaner and oil filter standard on gas model. Totally-enclosed drive motor, sealed-for-life bearings on electric model.

We invite you to compare the UTILITRUCS to any 6000-7000 lb. truck on the market! Without obligation, you can discuss them with your nearby Clark dealer, listed in the Yellow Pages of your phone book. Or write us for free descriptive literature.

*Special stevedoring model available

1953 CLARK EQUIPMENT

CLARK EQUIPMENT

Industrial Truck Division
CLARK EQUIPMENT COMPANY
Battle Creek 27, Michigan

For more information, write direct or use Reader Service post card.

New TOLEDO INDUSTRIAL LINE

These great new Toledos set new standards of fine performance with new clean-line design in handsome gray finish . . . double-pendulum mechanism in one-piece sector design . . . dial can be installed to face any of eight directions; also with full 360° swivel dial.

44 WAYS BETTER

New features in *every* model to serve you better—now added to world-famous accuracy and dependability of Toledo Scales! See them now—complete range of types and capacities to help you *control costs!* Whether it's weighing, checking, testing, counting, batching, force-measuring and other operations . . . there's a new Toledo to do the job with high *accuracy, speed* and *dependability.* Write for up-to-date scale information in new condensed catalog No. 2001. Toledo Scale Co., Toledo 1, Ohio.

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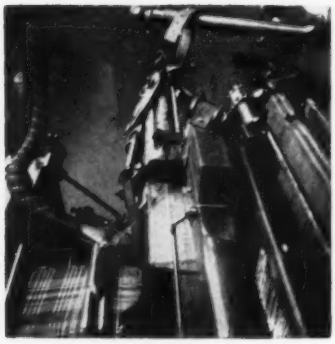
SALES AND SERVICE OFFICES IN 200 CITIES



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...they're engineered to satisfy driver, maintenance man, management

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1. Easier to drive

All controls at the driver's fingertips, like an automobile; compact and more maneuverable; shockless steering; increased braking efficiency; 140 sq. inches additional visibility; 25 inches of free-lift; DYNATORK or HYDRATORK DRIVE available on gas model.

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1953 CLARK EQUIPMENT

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Industrial Truck Division
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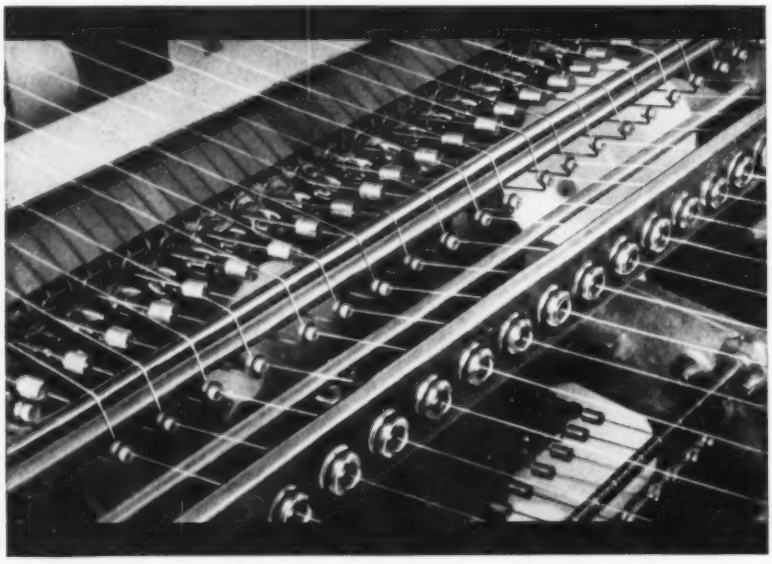
Better Warps—Faster—with McBride

INSTANT POSITIVE ACTION
STOP MOTION



. . . regardless of lint, dirt, or humidity conditions.

With the new McBride Super-Sensitive Sealed-Mercury-Switch Stop Motion, one tricot firm running a wide range of yarns, including the very finest (natural and synthetic), has reduced warping time from an average of over two hours per warp to less than 20 minutes. Lost ends formerly averaging 12 to 18 per warp now averages less than one.

This improvement was brought about by the installation of a McBride Magazine Creel with Super-Sensitive Sealed-Mercury-Switch Stop Motion.

SIMILAR RESULTS HAVE BEEN OBTAINED in the same plant by installing McBride Super-Sensitive Sealed-Mercury-Switch Stop Motions on existing creels of other makes.

Mc BRIDE

EDWARD J. McBRIDE COMPANY, INC.
DEPT. TW. COTTMAN AVENUE & WISSINOMING STREET, PHILA. 35, PA.

Doffmeter Stops Loom After Preset Yardage Is Reached

The Durant Doffmeter, designed for loom application, is a predetermined-type unit for measuring the yardage of cloth woven. It is manufactured by Durant Mfg. Co., 1931 N. Buffum St., Milwaukee, Wis. It will stop the loom or signal the weaver or fixer when a predetermined setting is reached, and it eliminates overruns and assures uniform lengths of cloth.

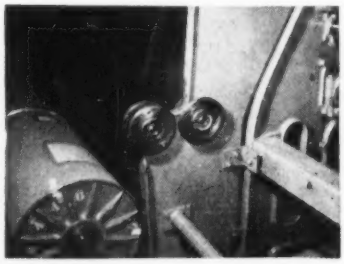
Doffmeters are available for clockwise or counterclockwise rotation and for right- or left-hand drive.

The meter can be driven either by a gear meshing with the gear on the sand roll or intermediate gear, or by a forked coupling.

(N-104)

Knitting

(*Continued from page 118*)



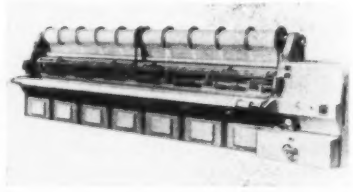
Beam Mounting Reduces Friction on Tricot Beams

A "floating" beam mounting for tricot machines has been developed by Gibbs Machine Shop, 1023 W. Lee Road, Greensboro, N. C. The new mountings are fitted to the end frames and center frames. Each unit consists of two steel disks that ride freely on ball bearings. The bearings are located on a threaded spindle that screws into the machine frame.

The disks are placed close together, and the beam sits on the V made by the disks.

The new mounting allows beams to be installed quickly and easily and is said to reduce shade marks caused by uneven friction on beams.

(N-114)



168-In. Tricot Machine Knits 600 to 750 Courses per Minute

The Ultraspeed Mayer tricot machine, which "cruises" at a speed of 600 to 750 courses per min., is available from Alfred Hofman & Co., 635 59th St., West New York, N. J.

Pattern chains are used in place of

On High-Speed Spindles or High-Inertia Card Drives . . .

TYPE D

Steel cage, metric series roller assembly with solid inner and outer race.

Steel cage, inch series, roller assembly, hardened or unhardened, no inner or outer race.

Rollway Bearings Reduce Maintenance Costs and Improve Work

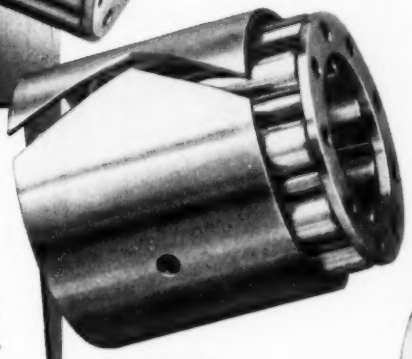
Spindles, lickers in, card cylinders, feed rolls, cylinder shafts, all work better on anti-friction bearings, and all require a bearing specifically adapted to the space, speed, load, over-load, torque, temperature, lint and many other factors.

That's why Rollway *Solid Cylindrical* Roller Bearings with their wide range of standard types and sizes in steel-cage, inch and metric series, afford the best balance of low power consumption, uniform rotation and tension on yarns and fabrics, and longer continuous operation without servicing or replacement.

Let Our Engineers Work for You

Forty-five years of design, operating and manufacturing experience are at your service for the asking. No charge. No obligation. Every detail held in strict confidence. Just send us details of load, speed and operating requirements. Or ask for one of our engineering representatives to call.

Rollway Bearing Company, Inc.
Syracuse, N. Y.



TYPE PA

Steel cage, inch series, roller assembly with heavy duty planished sleeve.

TRU-ROLL

Precision steel-cage, heavy-duty bearing with contoured guide lips, assuring maintained roller alignment. Free rolling approaches that of the most costly bronze-retainer bearing.

Right Angle Loading and Precision for Smoother, Longer Service

Rollway's right-angle loading, coupled with Rollway's right-angle precision of manufacture, assures true right-line rolling: No roller skew, no pinch-out, no end rub, no sliding friction, no cam action!

Write today for a detailed statement of the properties that make Rollway Bearings the *right* bearings for the textile industry.

Rollway Bearing Co., Inc.
Syracuse, N. Y.

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Complete Line of Radial and Thrust Cylindrical Roller Bearings

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DARNELL CASTERS & E-Z ROLL WHEELS

Here is a problem-solving book that will prove handy in textile mills for valuable reference. 192 pages describe the Darnell lines of fine casters and wheels and rubber products.

OVER 4000 TYPES of CASTERS & WHEELS

There is a type of Darnell Caster or Wheel for every kind of use and floor. Made for light, medium and heavy-duty service, you are sure to find in the Darnell line the exact caster or wheel to meet your individual requirements.

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& E-Z ROLL WHEELS

Always SWIVEL and ROLL

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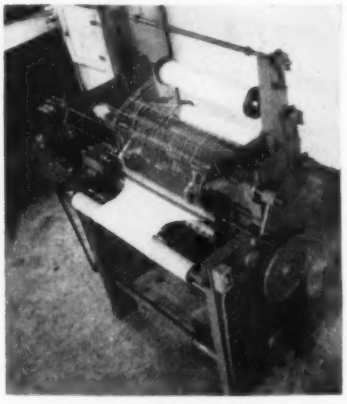
DOWNEY (LOS ANGELES COUNTY) CALIFORNIA
60 WALKER STREET, NEW YORK 13, NEW YORK
36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

wheels for versatility. The height of the machine is 4 ft. 4 ins., and it sits on blocks so that the working height can be made to suit any requirement.

The camshaft runs in an enclosed oil bath and drives the knitting mechanisms through short push rods from double-acting cams. The knitting elements are adjusted by changing the length of the push-rods by a screw attachment. The short coordinated movements cut down vibration.

The runner lengths are changed by adjusting a variable-size pulley. A roller, which stretches across the warp sheet, is turned by the yarn movement to the needles to control the variable warp-speed drive units.

(N-115)



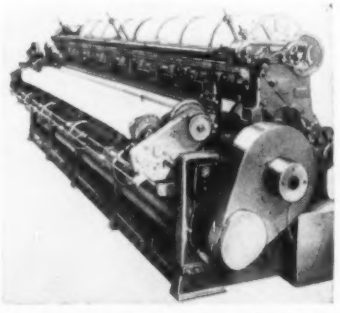
Sample Tricot Machine

A three-bar tricot sample machine is now available from Gibbs Machine Co., 1023 W. Lee St., Greensboro, N. C. The machine is built with a pattern-chain mechanism, although wheels can be supplied if needed.

The needle bar is 24 ins. wide and can be made in any gauge. Butted needles are used.

A ½-hp. motor is built into the rigidly constructed frame, and a V-belt drive connects a reduction unit to the camshaft. A brake-type let-off with sturdy bands controls the warp tension.

(N-116)



Improved RT-6 Tricot Machine

An improved model of the RT two- and three-bar tricot machine in all gauges, Model RT-6, has been developed by

MOVE **fast** AGAINST **fire**

WITH A KIDDE DRY CHEMICAL EXTINGUISHER

Just pick it up, point the horn and pull the trigger. That's all it takes to put out a fire with a handy Kidde Dry Chemical Extinguisher. Pound for pound, there's no faster or more effective portable on the market. A single trigger-pull gives you instant action, while Kidde's patented Diffuser Horn spreads an enormous cloud of fire-smothering dry chemical. Anyone can beat down fire in a matter of seconds, standing behind the "cool" protective wall of dry chemical that's set up. Kidde Dry Chemical portables come in 5, 20 and 30 pounds. Better get one today.

The word "Kidde" and the Kidde seal are trade-marks of Walter Kidde & Company, Inc. and its associated companies.

Kidde

Walter Kidde & Company, Inc.,
1191 Main Street, Belleville 9, N. J.
Walter Kidde & Company of Canada, Ltd., Montreal, P. Q.

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OUR STOCK OF CERTIFIED QUALITY STEEL ARE LARGE AND BECOMING MORE COMPLETE. QUICK, DEPENDABLE SERVICE IS ASSURED.

Plates, Structurals,
Bars, Sheets, Tubes, etc.
. . . Carbon, Alloy and
Stainless Steels . . . .

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MILTON

A TIME TESTED LINE

Engineered for Production

MILTON WARP BEAMS

for BROAD, NARROW FABRIC, RIBBON, VELVET, CARPET LOOMS

BROADLOOM BEAMS

For C & K Looms (pictured) and Draper Looms (with let-off gear). Steel barrels, cast iron flanges.

RIBBON LOOM BEAMS

Steel barrels, with your choice of adjustable head and fixed shaft (pictured) or fixed head with removable shaft.

Write for Catalog 45 (Steel) or Catalog 45-A (Light Metal)

GET THE COMPLETE STORY

MILTON MACHINE WORKS, INC.
DESIGNERS · ENGINEERS · MANUFACTURERS
MILTON, PENNA.

Robert Reiner, Inc., 556 Gregory Ave., Weehawken, N. J.

Standard features of the RT models are supplemented by improvements such as lighter knitting elements, smoother motions for higher speeds, larger cams and cam rollers, and a smoother guide-bar action.

The company's automatic beam-feeding device and guide-bar hangers have been improved and redesigned to insure a free-running yarn sheet that does not chafe.

For finer needle adjustment, new thrust bearings have been installed. They have more surface contact and stay in better alignment.

(N-117)

Low-Alloy Tubing Adds Life to Thread Carriers

To combat the grooving action of nylon yarn in thread carriers for its full-fashioned hosiery machines, Karl Lieberknecht, Inc., Reading, Pa., in collaboration with Superior Tube Co., Norristown, Pa., has developed a standard Type E-52,000 low-alloy tubing for carrier tubes on Kalio machines.

The tubing comes in two sizes: 0.126-in. O.D. by 0.078-in. I.D. for the bell-mouth tube at the top of the carrier where the nylon enters, and 0.050 in. O.D. by 0.032 in. I.D. for the bottom of the carrier where the nylon comes out.

(N-118)

Raschel Knitter Has 28 Needles per Inch

A new raschel knitter of 56 gauge (equaling 28 needles per inch), with up to five guide bars and equipped to take 21-in. and 14-in. (flange diameter) beams, is announced by Robert Reiner, Inc., 556 Gregory Ave., Weehawkeen, N. J. The machine is especially suitable for knitting netting and power net.

If two guide bars are used, the production speed is 400 to 425 stitches per minute and on four-bar power fabric, 350 to 400 stitches per minute. In view of the

Forget about static...
remember Vicara®

ZEIN FIBER

Are your customers complaining about static electricity in garments made of some of the new fibers?

Static causes fabrics to attract and collect lint and dirt. Static makes the lint and dirt cling. It makes the fabrics cling together—or to you.

But *not if there's enough Vicara in the blend!* *Vicara* actually dissipates static. *Gets rid of it.* This unique advantage is directly linked to the ability of *Vicara* to absorb large quantities of moisture, the important property that gives *Vicara* its built-in comfort.

The static problem is fast developing into an industry headache. Why make it *your* headache? Because there is an antidote...soft, luxurious, *anti-static Vicara!* Whatever the fabric, whatever the blend...remember *Vicara* is the fiber that improves the blend!

The anti-static quality is only one of the exciting extras of this new luxury fiber. There's the soft, comfortable feel that's non-irritating, non-scratching and gentle to the most sensitive skin...exceptional warmth and long, long wear...high resistance to pilling, moths and mildew.

● ***Watch your customers welcome Vicara in hosiery, knit goods, suits, dresses, sport clothes, upholstery fabrics, blankets, and knitting yarns.***

Vicara

THE FIBER THAT IMPROVES THE BLEND

UNIFORMITY • BEAUTY • VERSATILITY • ECONOMY • EASE IN USE • SPINNABILITY
DYE-ABILITY • WARMTH • HANDLE, FEEL AND DRAPE • ELASTICITY • RESILIENCE
ABSORBENCY • HEAT RESISTANCE • WASHABILITY • NON-FELTING • NON-ITCHING
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The COLE Spherical Tank on Tubular Tower is unique in its field. We design and erect special tanks of this character. It provides an attractive and serviceable unit—economical to maintain, efficient in service and pleasing in appearance.

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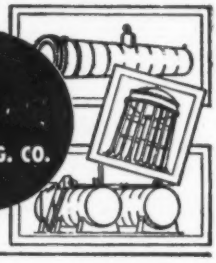
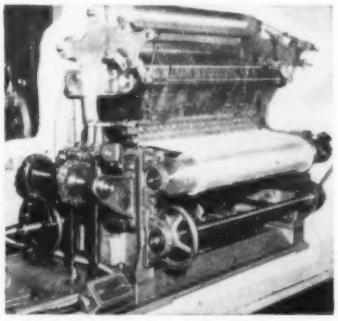


fine gauge, the knitter reaches the speed of a three-bar tricot machine of the same number of needles per inch.

The unit can also be used for knitting elastic fabrics at high speeds.

(N-119)



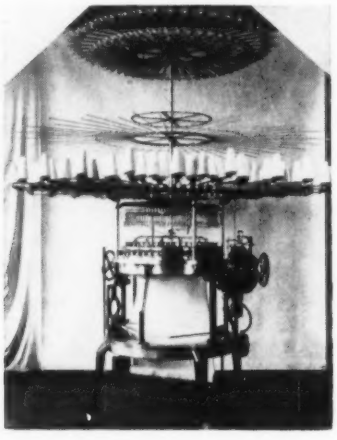
Gauge Can Be Changed On Sample Tricot Machine

Gauges from 14 to 32 are possible on the 3x2x4-ft. Samplette machine developed by Bearing Products Co., 3339 Lancaster Ave., Philadelphia, 4, Pa.

The sample knitter is powered by a ½-hp. motor. It can be equipped with a variable-speed motion to slow the knitting speed down for observation purposes.

The pattern chain can be set up from 16 buttons to any desired length.

(N-120)



Circular Jersey Machine Features Fabric Evenness

A multiple-feed balbriggan machine, with a 30-in.-dia. cylinder and any desired needle index, has been introduced by Wildman Mfg. Co., Elm and Astor Sts., Norristown, Pa. It is designed with 48 and 64 feeds.

The 48-feed machine is arranged with a 48- or 96-end electric stop motion, while the 64-feed unit has a 64-end stop motion.

The machine is equipped with cylinder stitch overthrow guard cams that move in unison. Thus the knitting of different-length stitches by needles that may be tight or loose in their slots is eliminated.

An adjustable knockover cam operates

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Many expert textile men are members of the permanent technical staff of Hubinger's famous laboratories. You are invited to consult these experts on any production problem involving the use of starch—without cost or obligation on your part.

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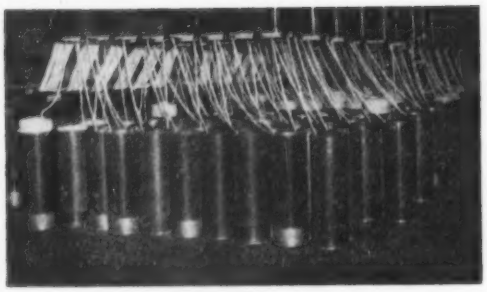

This set-up handles 10 ends carded cotton or synthetics. Overhead suspension system allows free movement of cans and operator

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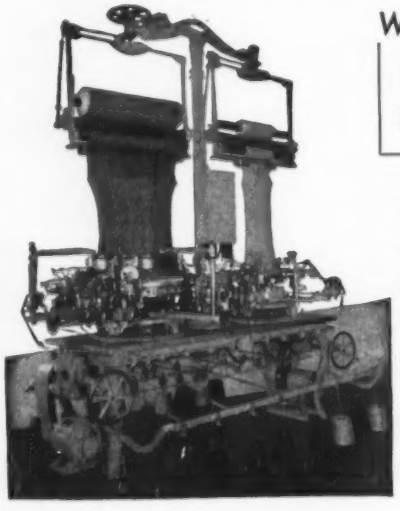
ACTUAL MACHINE COMPARISONS REVEAL

LOWER COST PER YARD WITH PERFECT CLOTH ALL THE WAY!



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NEW DATA SHEET
Showing Actual Comparisons

This new data sheet gives you the kind of cost, production and quality information you've been looking for—it shows actual machine comparisons with the NEW TOMPKINS D-2 DOUBLE HEAD SPRING NEEDLE KNITTING MACHINE shown here. The subjects covered include: Fabric Flexibility; Perfect Rolls of Cloth; Needle Breakage Reduced One-Half; and Needle Savings!

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on the web-holder implements in the dial. Stitches can be regulated by the micrometer stitch adjusters and the movable knockover cams.

(N-121)

Embroidery Machine Produces 15-Yd. Fabric at 130 Rpm.

An embroidery machine that produces a 15-yd. fabric has been developed by Robert Reiner, Inc., 556 Gregory Ave., Weehawken, N. J. The 58½x7½-ft. automatic-shuttle machine handles cotton, nylon, silk, rayon, and acetate yarns.

The upper and lower banks each have 513 needles, 513 borers, and 513 shuttles; the shuttles hold 150 yds. of yarn on enclosed bobbins. Stitching speed is 130 shuttle strokes per minute.

The frame moves independently in increments of 1/160 to ¾ in.—up-down movements to 24 ins. and sideways movements to 19 ins.

Two spanning men handle 15 40-in. pieces of fabric at a time, and it takes 20 min. to span 30 pieces. Yarn protectors keep the ends from tangling.

The machine weighs 15 to 18 tons and requires a trench-like foundation about 2 ft. wide and 18 ins. deep.

Price: $62,000 for the machine and up to $1,000 for the foundation.

(N-122)

Wet Processing, Finishing

(*Continued from page 122*)

Oil-Detection Lamp

A high-intensity, long-wave, portable black-light inspection lamp for use in laboratories and industry has been announced by Ultra-Violet Products, Inc., 145 Pasadena Ave., South Pasadena, Calif. The lamp is an intense 100-w. ultraviolet hand unit that operates on 110-v., a.c. power.

The lamp is useful in detecting oil on fabrics. It costs $79.50.

(N-149)

Half-Hose Finishing Machine

A new British machine conditions, stretches, presses, and dries half-hose in a continuous and automatic process. Manufactured by Messrs. Samuel Pegg & Son, Barkby Rd., Leicester, England, the new machine can process 24 to 35 doz. pairs

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WHICH MAKES MONEY FOR YOU—AND YOUR EMPLOYEES

You can prove to employees that management has a sincere interest in their personal welfare—through a program that permits them greater earnings, better opportunities for advancement, greater working comfort and safety, less fatigue. And you can prove its value to your company—in specific dollars-and-cents terms.

"EYES RIGHT FOR THE JOB" MEANS BETTER WORKING EFFICIENCY

The program is the Bausch & Lomb Occupational Vision Service. It is a scientific method, based on findings of a continuing study at the Occupational Research Center of Purdue University, for correlating visual skills to job requirements. Now in its eleventh year, it is successfully operating in hundreds of plants, reducing costs and improving employee morale.

A PROVED METHOD TO HELP YOUR PLANT MAKE MONEY 9 WAYS

The Bausch & Lomb Occupational Vision Service is available to you. It is easy to administer. Employee participation is voluntary . . . *and workers like the program.* Benefits which accrue in plants using O.V.S. (benefits which can accrue in your plant, too) include:

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2. Increased production per worker
3. Reduced waste of materials and work rejects
4. Improved accident record
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8. Reduced absenteeism
9. Improved employee relations

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Send for the brochure "Eyes Right for the Job," which tells what the Bausch & Lomb Occupational Vision Service is, how easily it can be administered in your plant, and at what low cost.

Bausch & Lomb Optical Co., 95123 Smith St., Rochester 2, N. Y.

Please send me the brochure "Eyes Right for the Job," and complete details on the Bausch & Lomb Occupational Vision Service.

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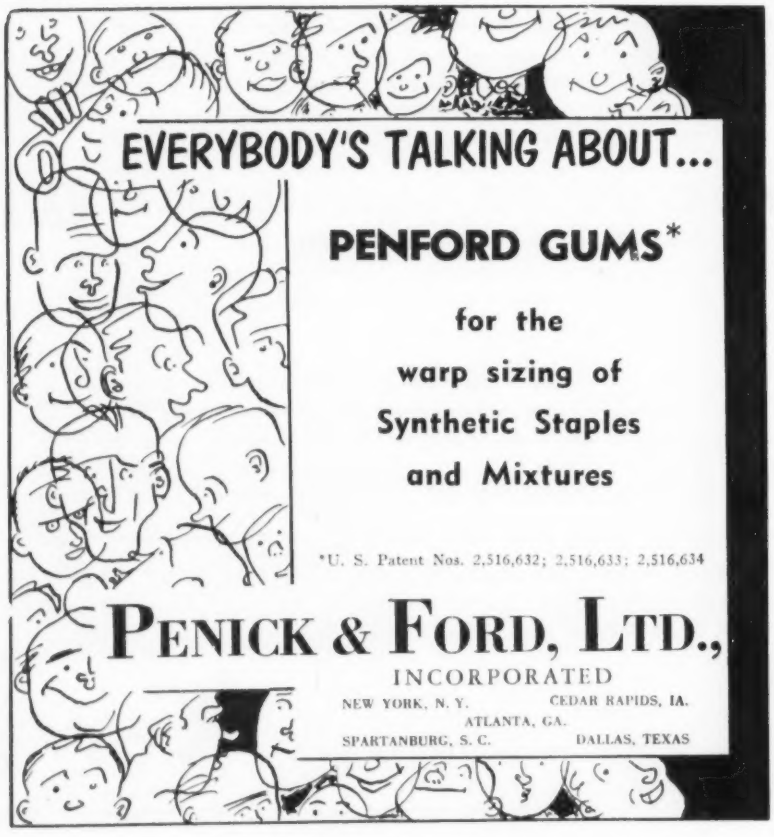
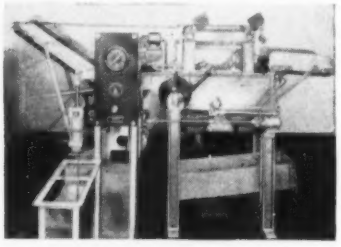
Southeastern Representative: Lucas Associates, Inc., Box 1696, Charlotte 1, N. C.

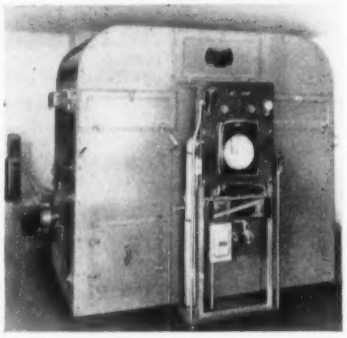


per hour. Two operators are required: one strips and the other trims.

The socks pass through dry steam and then grippers close on the welt and stretch the sock down the form to insure uniform finished length. The socks pass through a second pair of conditioning beds and then between a steam-heated finishing press. Drying is completed as the forms move through a steam-heated insulated cabinet in which the temperature can be varied to 250° F.

(N-150)





Laboratory Washer and Dryer

A pilot-model washer was recently developed by C. G. Sargent's Sons Corp., Graniteville, Mass., in cooperation with Lowell Technological Institute Research Foundation, for the purpose of tracking down and measuring textile-fiber-processing sources of stream pollution. The junior-size washer is now available to pilot plants and laboratories.

A companion unit, a 7-ft. 1-in. x 7-ft. 6-in. x 8-ft. 10½-in. junior dryer, is now on the market as a companion unit to the washer. Both Lab Twins have complete control and recording instrumentation.

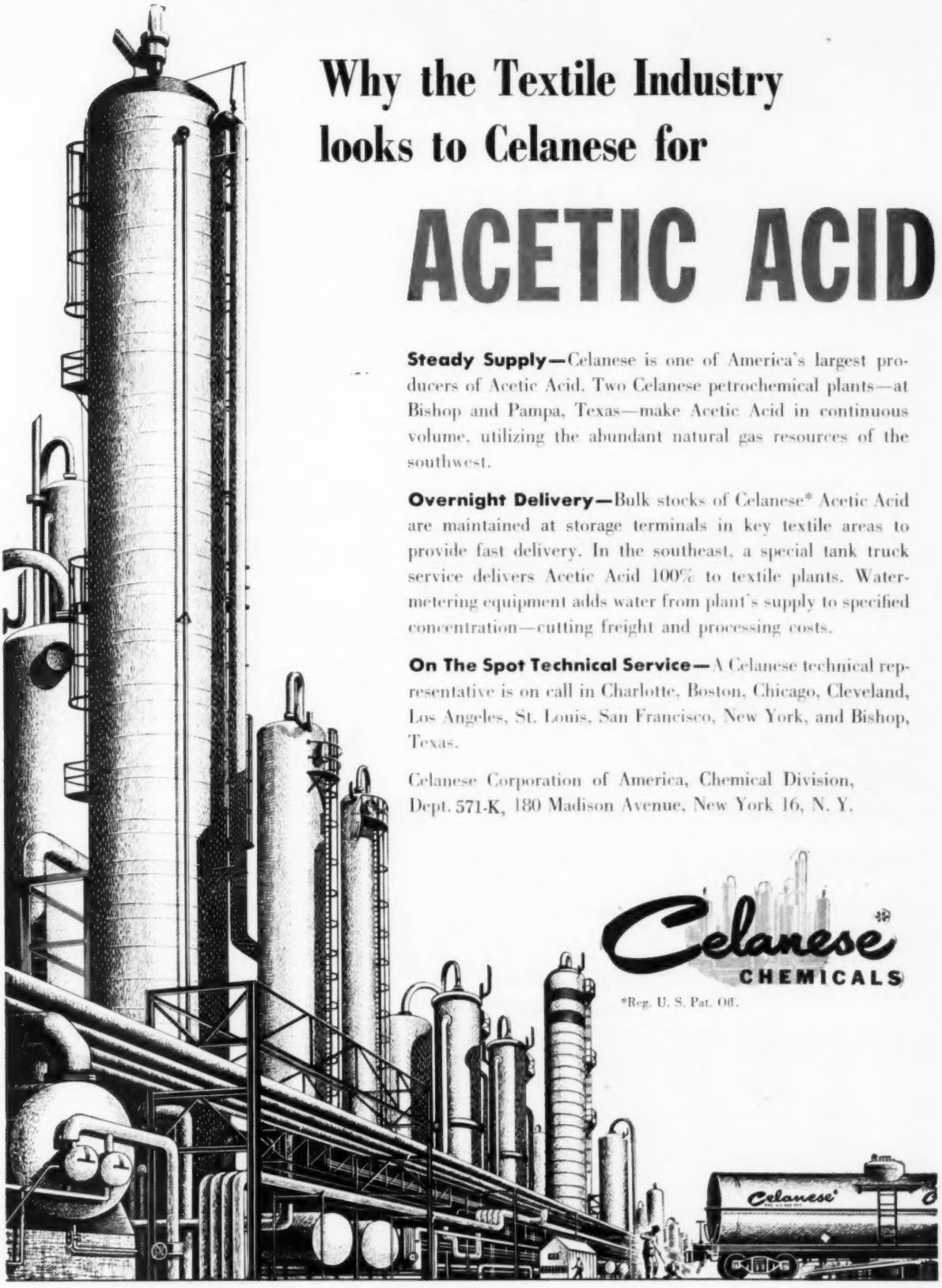
The washer has a 36-in. long, 10-in. wide stainless steel bowl. There are two 60-in. hoppers. Liquor capacity is 16 gals.

The dryer air flow can be made updraft, downdraft, or cross convection. Pole, tray, or apron drying can be done. Air speeds from 50 to 1,000 ft. per min. are possible by means of a variable fan speed.

(N-151)

Package-Dyeing Machine Uses Liquids Up to 120° C.

A high-temperature package-dyeing machine that uses closed circulation under pressure has been made available to American mills by Mezzera S.p.A., Milan,



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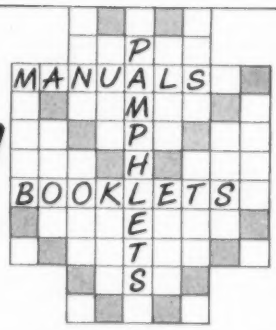

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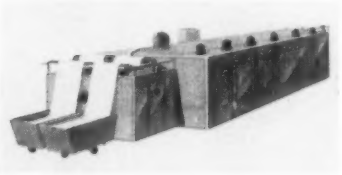
Italy, through its agent, Ernest L. Frankl Associates, 22 E. 40th St., New York 16, N. Y. It makes possible dyeing with liquids circulating in a closed circuit under pressure at temperatures up to 120° C.

Blends such as wool-nylon, wool-acetate, wool-viscose, and others can also be dyed with regular dyes in the unit.

A small sampling tank permits the checking of shades. Another small tank allows the adding of dyes and chemicals without loss of pressure.

The unit is provided with a heat exchanger that can cool the machine down so that it can be opened soon after dyeing has been completed.

(N-152)



Loop Dryer-Curer

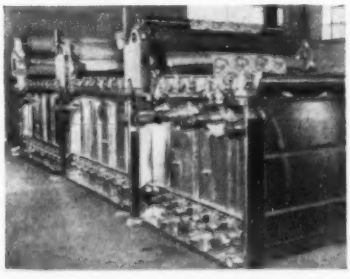
A newly designed loop dryer-curer makes possible the efficient drying of spun rayons, silk piece goods, toweling, terry cloth, and similar fabrics, as well as the proper curing of resin-impregnated fabrics, according to Proctor & Schwartz, Inc., 710 Tabor Road, Philadelphia 20, Pa.

Utilizing a new type of fan that controls air movement closely, the loop dryer gives (1) maximum production with minimum power requirements, (2) even drying for a wide variety of fabrics, and (3) circulating air that is adjustable to varying drying conditions.

Lint screens, heater coils, and direct-driven motors are accessible.

The design of the loop dryer-curer has been standardized enough for short delivery. Available widths are 6, 8, 10, and 12 ft.

(N-153)



Tensitrol Washer Improves Rayon-Fabric Boil-Off

Additional uses such as the boiling off of size, resin treatments, and water-repellent treatments on rayon fabrics, are being found for the Tensitrol open-width washers manufactured by Rodney Hunt Machine Co., 66 Mill St., Orange, Mass.

The three- and four-compartment washers allow the fabric to obtain sufficient initial shrinkage during the boil-off process

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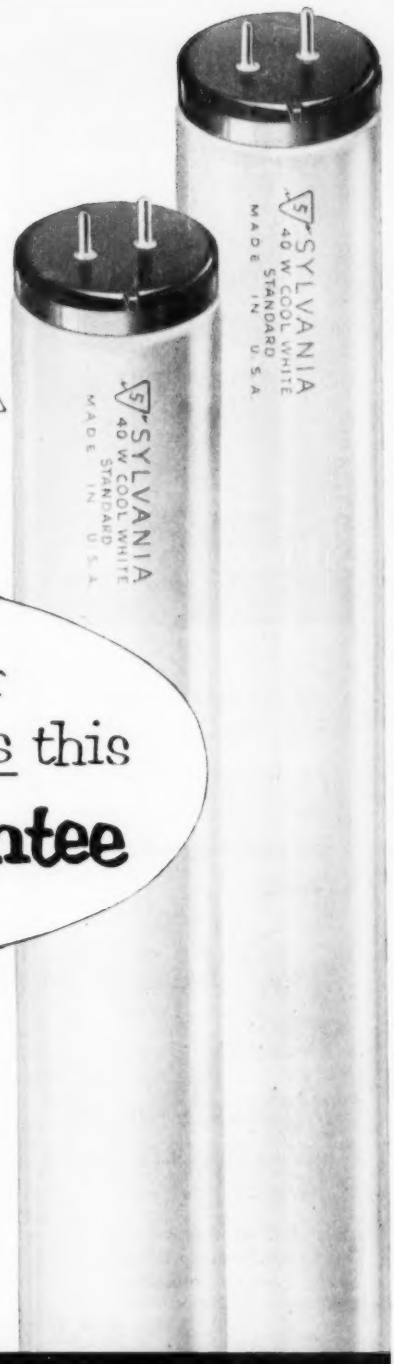
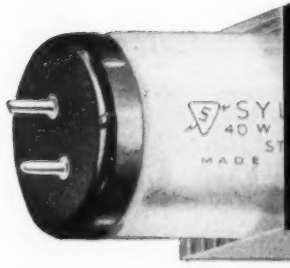


Sylvania Lamps offer a "Bonus-of-Light" plus this **Money-Back Guarantee**

Sylvania Fluorescent Lamps now give you *longer-lasting* brightness than they ever did before, resulting in a 6% "Bonus of Light," worth more than the cost of the lamps themselves. This advantage is made possible by an exclusive coating technique resulting in STABILIZED PHOSPHORS. Also, Sylvania's Planned Maintenance System of Group Replacement will save real money for your office, plant, store, or school. For full details write Sylvania or call your nearest Sylvania representative.



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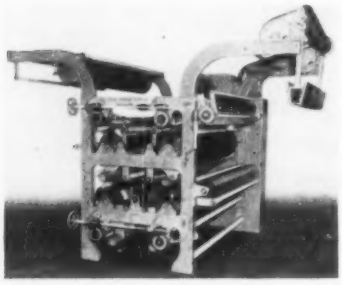
In Canada: Sylvania Electric (Canada) Ltd., University Tower Bldg., St. Catherine Street, Montreal, P. Q.

to be ready for dyeing in rope form without danger of rope marks and crack marks. Excellent results have been reported on spun-rayon fabrics and on many plied-yarn crepe fabrics.

(N-154)



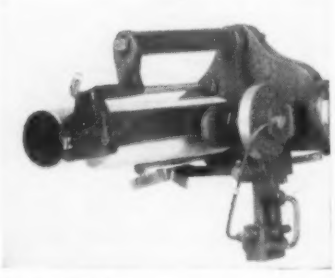
Steam Brush for Fabrics

A new four-cylinder ball-bearing steam brush has been developed by David Gessner Co., 41 Fremont St., Worcester, Mass. It was designed specifically for use with fabrics that must be cleared out and softened.

The machine is equipped with two 16-in. brushing cylinders clothed with nylon bristles. The two front brushes are equipped with a combination of nylon bristles and sandpaper slats. These cylinders are driven by a positive chain drive.

Automatic brakes eliminate coasting. A variable-speed drive ranging from 35 to 80 yds. per min. (optional equipment) and independently adjustable contact rolls facilitate brush adjustments as needed.

(N-155)



Cloth Guider

A cloth guider that is equipped with a new air valve for quicker operation and that reduces the side-to-side movement of cloth going through the rolls is manufactured by Guider Roll & Service Co., Box 3747, Peninsula Sta., Daytona Beach, Fla.

(N-156)

Shaft Is Removed Hydraulically

Renu-Shaft, a new development of Rodney Hunt Machine Co., 66 Mill St., Orange, Mass., makes it unnecessary to discard a good brass roll because of the difficulty of replacing worn or broken shafts. The renewable shafts pressure-fit into the roll head yet can be forced out hydraulically.

At the base of the shaft, a well is connected to the face of the roll head by a right-angle channel sealed with a Zerk

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Package Dyed Viscose Yarns

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Cake Dyed Viscose Yarns

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WITHIN A SHORT TIME, you will receive your copy of the BUYERS' GUIDE and REFERENCE DATA ISSUE. This Mid-November number is so packed with information important to your daily work that, needless to say, you'll make a special effort to keep it available for instant use. Here are its features:

REFERENCE DATA SECTION—This section will contain over 100 charts and tables designed to help you with mill problems. Its pages will contain information on both natural and synthetic fibers. Production information on carding, spinning, throwing, knitting, weaving, dyeing, and finishing will be included. There will be no looking-up place like this REFERENCE DATA section anywhere else in the industry. You will find it a constant help in your work.

BUYERS' GUIDE SECTION—This section will contain approximately 100 pages of over 2,500 product headings for machinery, equipment, chemicals, dyestuffs, and other supplies, together with the names and addresses of manufacturers. Companies supplying services to the industry—factoring, engineering, commission work, etc.—will also be represented under a number of headings.

In addition, 265 companies will supplement their product listings with detailed information about their products in their advertising space. Such information will be page-referenced in the Classified List, thereby giving you a fuller story on a product or a service. This BUYERS' GUIDE section will save you hours of time otherwise lost looking for sources.

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Textile Manufacturers

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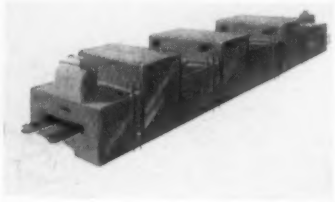
For nearest LUBRIPLATE distributor, see Classified Telephone Directory. Send for free 56-page "LUBRIPLATE DATA BOOK"... a valuable treatise on lubrication. Write LUBRIPLATE DIVISION, Fiske Brothers Refining Co., Newark 5, N. J. or Toledo 5, Ohio.

REGARDLESS OF THE SIZE AND TYPE OF YOUR MACHINERY, LUBRIPLATE LUBRICANTS WILL IMPROVE ITS OPERATION AND REDUCE MAINTENANCE COSTS.

grease fitting. With the fitting open and the shaft hole filled with grease, the shaft is driven on to within ½ in. of full depth. The Zerk fitting is then closed.

To remove the shaft, a hand grease gun or other equipment of 10,000-psi. capacity is applied to the fitting. Pressure of several tons on the back end of the shaft is created, causing a steady pushing out of the shaft from the body of the roll.

(N-157)



Tenter Housing

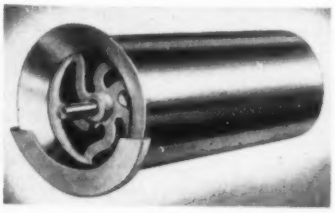
A new tenter housing, featuring a redesigned heating and fan system that makes possible highest tenter-housing efficiency, has been developed by Proctor & Schwartz, Inc., 710 Tabor Road, Philadelphia 20, Pa.

The units can be adapted to specifications to meet individual mill requirements.

Two fans are used in each penthouse to give the maximum air movement and drying capacity per foot of tenter-housing length. Air circulation is adjustable to suit individual conditions.

The design provides for complete accessibility to the interior of the housing for cleaning and maintenance purposes.

(N-158)



Cooling Cylinder

A new Type-W open-end cylinder that is easily installed on calenders, embossers, tenter frames, or on Sanforized-process units is now being made by J. E. Carroll & Co., 112 Cambridge Street, Lowell, Mass. Three inches of water on the bottom of the cylinder will cool cloth below room temperature. A cooling-off period is eliminated, and the fabric finish is improved.

(N-159)

Measuring Unit Has Variable Speeds

Designed to handle large 36-in.-wide rolls of cloth more efficiently, a new inspecting machine has been put on the market by Hermas Machine Co., Hawthorne, N. J.

The frame is of 5-in. channel steel, and it takes the weight of 36-in. cloth

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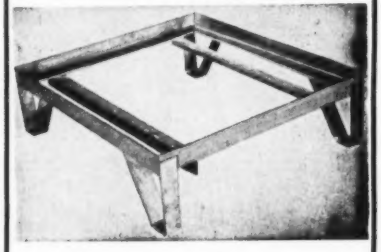

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Rayon Reports

AVISCO® RAYON BRINGS NEW SALES APPEAL TO FLOUR, FEED AND MEAL BAGS

Comparative Test Data Compiled By Avisco Technicians

Leading bag companies are producing bags of Avisco rayon for packaging flour, feed, meal, and other products. The Bemis Bro. Bag Company and the Chase Bag Company have begun distribution and they report a strong acceptance by suppliers and their customers.

The fabrics come in different constructions and weights to suit various packaging needs. All are strong and closely woven to eliminate excessive sifting of the contents. They are easy to handle in filling, stacking, and shipping.

Colors are clear and fast, in prints, stripes, and several solids. The solid colors and stripes are produced through the use of spun-dyed fibers. Since rayon is naturally white, the white fabrics stay white without bleaching. Consumers are instructed that the initial washing removes the labels and automatically preshrinks the fabric.

The rayon bag fabrics have unusual appeal to women who use them for sewing. They are easy to sew, have a rich luster and good drape, suggesting many new home uses.

A promotional program is planned to further these home uses. A consumer leaflet "Glad Rags from Rayon Bags," giving ideas and instructions for sewing is available free of charge. Photographs and stories are being released to rural newspapers and farm publications. Information is being sent to Home Demonstration Agents.

Technical Data Compiled

Avisco's Fabric Development Department has developed a wide range of rayon bag sheetings and industrial fabrics and tested them exhaustively. In a paper prepared for the American Association for Textile Technology, Walter C. Hauer and Herbert J. Sanders of the Development Dept. present the test data.

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MAKE USE OF *Avisco*®
4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

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VINOL Polyvinyl Alcohol is extensively used in the Adhesive, Textile, Paper and Packaging Industries. VINOL is non-gelling, white, free-flowing, fast-dissolving and uniform.

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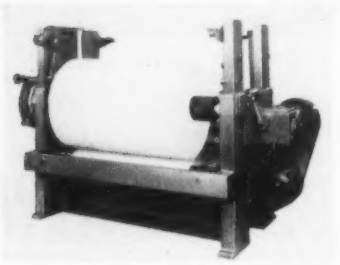
rolls without vibration. Other structural parts are equally sturdy.

For greater flexibility in operation, there is a variable-speed drive with a 9:1 ratio, which is a greater range than is usually given to inspection frames.

(N-160)



Jig Gives Constant Cloth Speed

A new dye jig featuring relatively constant cloth speed and controlled constant tension has been announced by Van Vlaanderen Machine Co., 370 Straight St., Paterson, N. J. The new unit, called the Dyemaster, is claimed to have great versatility. Cloth tension is controllable.

Stopping, starting, reversing, and the number of passages of the fabric through the dyebath can be preset and automatically controlled. Thirty-four-inch batch rolls permit high production.

Other features of the machine are: tension-controlled loading and unloading by a mechanical arrangement; a hydraulically damped oscillating expander arrangement; and a new main-drive gear box, using bevel gears mounted on antifriction bearings and running in oil for highest efficiency.

(N-161)

Automatic Dye-Jig Drive Fits Existing Equipment

A special patented driving unit for converting any dye jig into an automatic machine has been developed by F. Smith & Co. Ltd., Rochdale, Lancashire, England. The unit will reverse at the end of each run, automatically stop on completion of a predetermined number of runs, run at a constant cloth speed, and eliminate fabric tension.

Couplings are included for connecting the drive to existing jigs. All the old gearing, clutches, and side shafts are removed so that all that is left is the jig body with the top driving rolls in position. The driving unit is then placed against the jig and is fitted in a matter of a few hours.

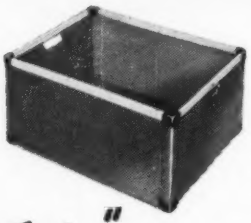
The units are designed for an a.c. supply but can be used as well with d.c. and a converter.

(N-162)

Control Instrument for Vat-Dye Reduction Potential

The Dynalog Redox Recorder, which measures the oxidation-reduction potential of vat dyes, has been developed by the Foxboro Co., Foxboro, Mass. The standard EMF recorder is especially suited to

tough babies



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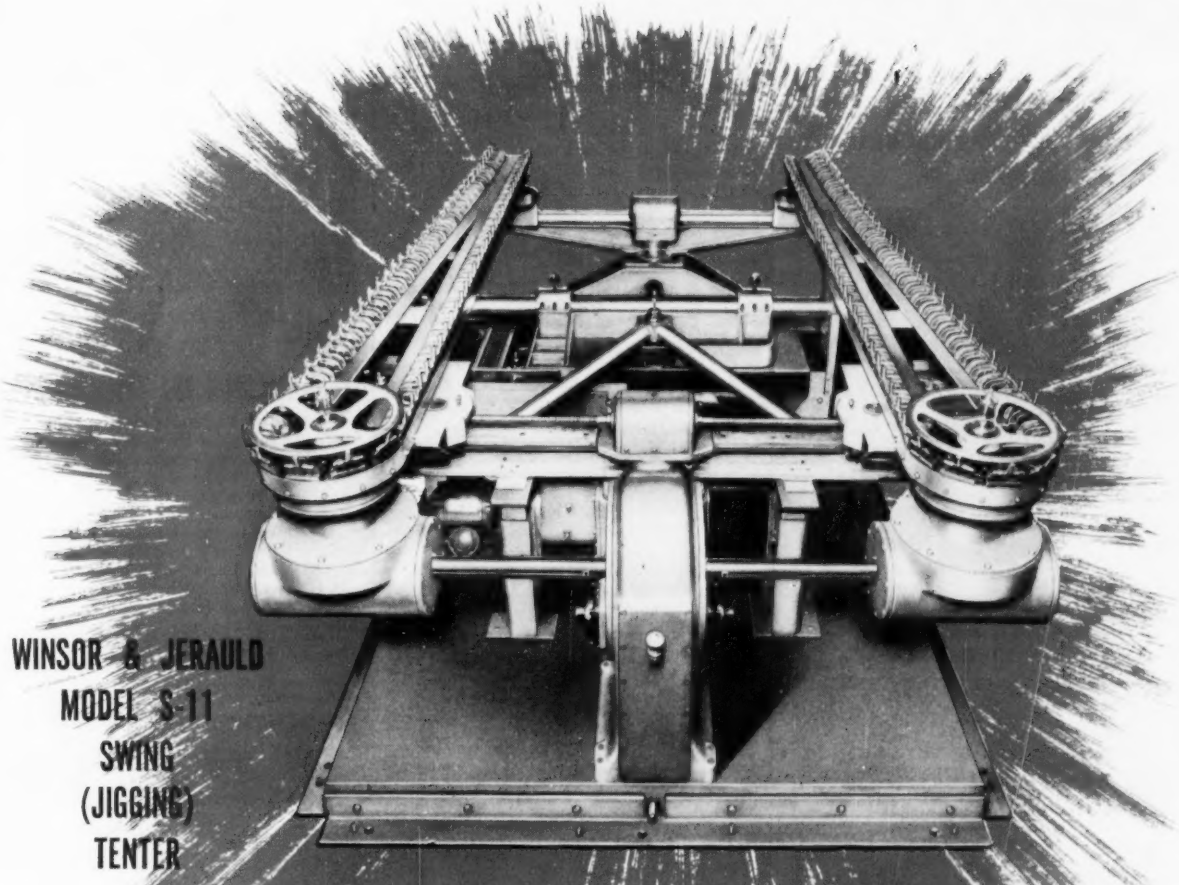

WINSOR & JERAULD MODEL S-11 SWING (JIGGING) TENTER

As a companion to its famous T-4 High Speed Tenter, Winsor and Jerauld is pleased to present its Swing Tenter Frame SX11, a Swing Tenter which has no equal.

The head end of the Tenter is built on a rigid steel bed plate to assure strength and vibrationless operation. Everything in the main driving assembly is mounted on Timken roller bearings to reduce frictional loss. Adequate provisions for heat expansion has been provided for at all required points.

The number of oscillations per minute, the adjustment of the length of the swing action, the operation of the power opening and closing of the frame itself and the main drive of the tenter are all independent of each other.

Extreme smoothness of the swing motion has been accomplished through an entirely new design action which is easily adjusted for length of stroke. The swing action has the additional feature in that the fulcrum motion is at the edge of the cloth rather than at the center of the rails, as was previously the case. This means, in effect, that the cloth will be held at even tension and width through the swing.

When the need arise, the Swing Tenter SX11 may be operated as a straight tenter.

May we be of service to you in your tentering problems? Our staff of experts in cloth finishing machinery are at your service at no obligation to you.

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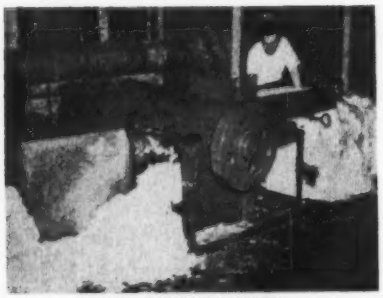

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Let us know what your textile problem is. We will describe the Taylor-Stiles machine to do the cutting effectively at minimum cost.

Engineering service.

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the Marhen process because it receives its electrical signal directly from the dyebath. There is an accurate, continuous measurement of the vat-dye reduction power in millivolts to guide the control of the process.

Commercial users have reported savings of up to 1,000 lbs. of hydrosulfite per day, increases of 10 to 20% in color yield, excellent shading from high temperature (200° F.), and production-speed increases up to 100%.

(N-163)

New Feed Mechanism Improves Stitching Versatility

A new feed mechanism that makes possible a plain crochet stitch or a three-stitch shell on shell-stitch machines has been developed by Merrow Machine Co., 2803 Laurel St., Hartford 6, Conn.

A change from shell stitching to crocheting (or the reverse) requires only the movement of a lever. This change may even be made while the machine is in operation. In addition, five different combinations of shell and crochet stitching are possible with only minor changes.

(N-164)

High-Speed Tacking Units

A butt-seam tacking range for the rapid tacking of tricots and synthetic and worsted fabrics has been put on the market by Birch Bros., Inc., 32 Kent St., Somerville 43, Mass. The unit eliminates turning of selvages in cases where chain-stitch sewing is done ¼ in. from the outer edge or edges of the cloth.

A companion unit is likewise available: a chain-stitch tacking head that has ball bearings and so can operate at high speeds. It is counterbalanced to minimize tension during processing. It is capable of tacking at speeds up to 60 yds. per min.

(N-165)

Tubular-Knit-Fabric Bleaching Range

A continuous conveyor-type bleaching range for tubular-knit fabrics has been designed and made available by Proctor & Schwartz, Inc., 710 Tabor Road, Philadelphia 20, Pa. Tubular-knit fabric is carried through the steaming unit in a relaxed state. The unit is designed to replace kier and J-box bleaching.

An excellent bleach, with the least possible tension from start to finish, is said to be obtained by use of the range in conjunction with the new Con-O-Matic washer (also made by the company) embodied in a saturator and as a final washer.

(N-166)

All-Purpose Calender For Circular-Knit Finishing

Auxiliary attachments for the Tube-Tex tensionless calender that enable circular-knitting mills to use the machine as a

Permalube
SADDLES and NEBS
Wear Longer • Perform Better and Cost Less!

NO OILING IN THIS MILL

One 600,000-spindle mill has been using Whitehead Permalube Saddles and Nebs for two years on *hardened-steel* rolls. Ends down have been reduced from 30 to 15. Frames are cleaned only once in several weeks, instead of twice daily. And oiling costs have been completely eliminated. Whitehead Permalube Saddles and Nebs can do the same for you. Write for complete information.

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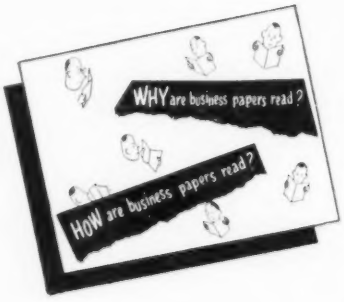

A copy of this quick-reading, 8-page booklet is yours for the asking. It contains many facts on the benefits derived from your business paper and tips on how to read more profitably. Write for the "WHY and HOW booklet."

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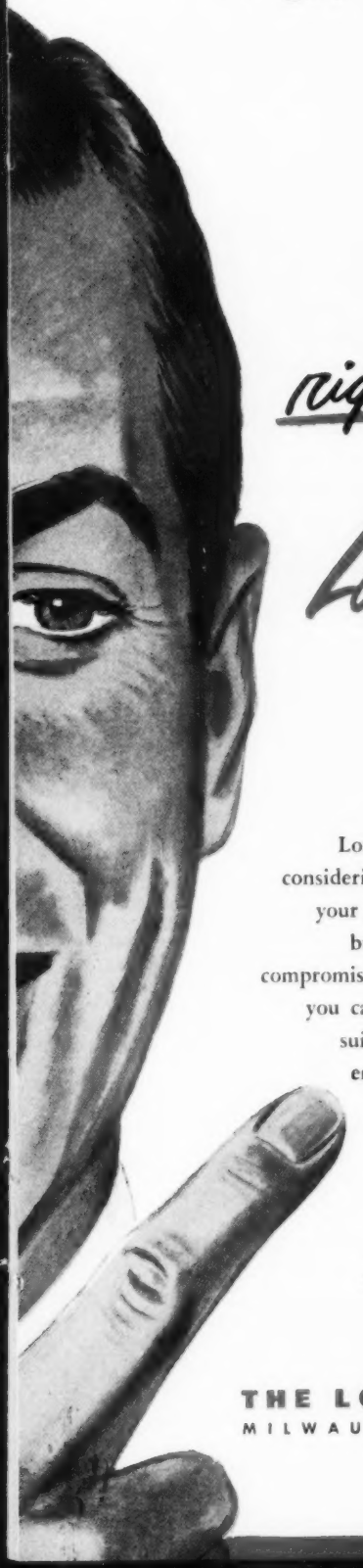

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It pays to think first of the Louis Allis Co. whenever you're considering adjustable speed drives for your product or plant. Louis Allis builds all basic types. There's no compromising — from this complete line you can select the unit that's exactly suited to your job conditions and engineered for your application.

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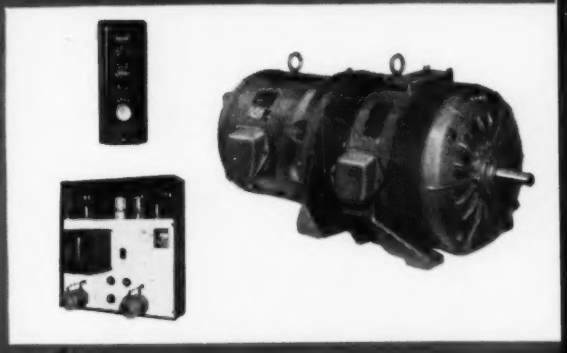
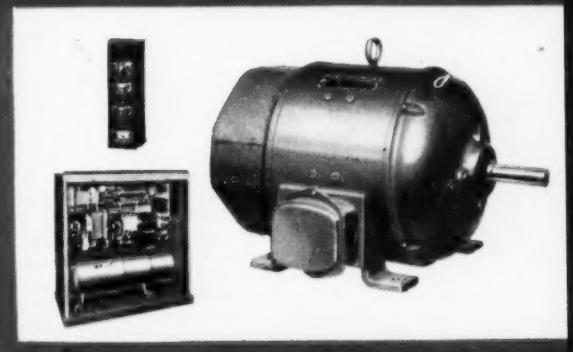
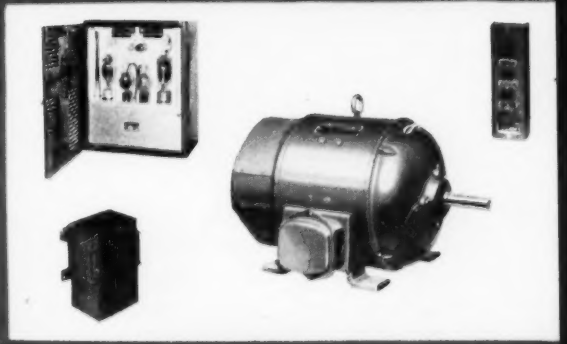


AUSTO-SPEED. ¼ to 75 horsepower. A versatile eddy current clutch combined with a constant speed AC squirrel cage motor provides wide, continuous duty speed ranges. Tachometer feedback circuit offers precise speed regulation in an unusually compact drive. Many optional features available — dynamic braking, torque control, threading speeds, inching, jogging, multi-motor operation and ringo drives.



SELECT-A-SPEED. 5 to 200 horsepower. New magnetic amplifier and adjustable voltage control provide superior speed regulation — better than required on most machines — from ½ base speed or less to full base speed. All-electric circuit — easily serviced. A.C. source, converted to D.C. by motor-generator set, drives adjustable speed D.C. motor. Many special control features available — reversing, dynamic braking, jogging, special programming or sequencing control, extra wide speed range. All drive motor enclosure available.



NEW! ELECTRONIC SELECT-A-SPEED. ½ to 15 horsepower. D.C. adjustable speed drive motor operates from A.C. electronic power unit. Infinitely adjustable speed ranges 5:1, 20:1, 50:1, 100:1 available. Unusually close speed regulation to ⅛ % with optional tachometer feedback circuit. Included as standard are: dynamic braking, torque limit, line voltage compensation. A few available modifications include: reversing, jogging, threading, and quick slow-down. All motor enclosures and control stations — from open to explosion-proof.

. . . From SPARTANBURG, S. C.

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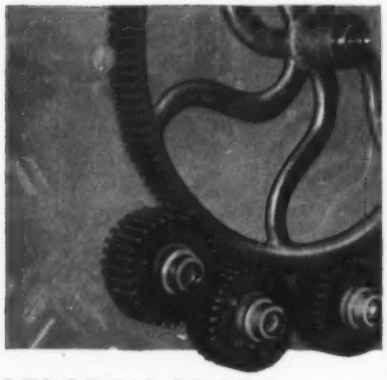
TEXTILE NEWS



CELORON GEARS

. . . reduce wear on larger, more expensive gear in this textile printing machine. Prior to the use of Celoron, metal gears had to be replaced after one to two months' operations. But, since installing nine Celoron Gears over a year ago, there has been no wear on the main gear, no replacement of the Celoron Gears. C-D-F Celoron has high impact strength, excellent resistance to heat, oil, and water. For gears that are silent in operation . . . with uniform strength in every tooth . . . get C-D-F Celoron. *Ask your gear cutter for Celoron . . . always in stock at C-D-F Spartanburg, S. C.!*

CELORON POT-EYE

Here's a low-cost molded product made from C-D-F Celoron. This pot-eye is extremely smooth and strong . . . resists wear, never corrodes. Has excellent resistance to high heat and moisture. Thousands of similar, low-cost parts can be produced by C-D-F . . . who has the know-how, the equipment to mold and machine plastics for any use.

Write now for C-D-F Celoron catalog with specifications and horsepower ratings.

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Continental-Diamond Fibre Company

NEWARK 55, DELAWARE

. . . with Textile Headquarters at 834 Hayne Street, Spartanburg, South Carolina.

Call Spartanburg 3-6397 for DILECTO and DIAMOND FIBRE materials handling equipment . . . trucks, boxes . . . loom parts . . . top-speed shipments of CELORON silent gear blanks . . . friendly service from your C-D-F sales engineer.

regular calender, as a straight-stripe finisher, as a shrinkage-control machine, or as a sweater-framing and -steaming unit have been designed and made available by Tubular Textile Machinery Corp., 33-61 54th St., Woodside, L. I., N. Y.

The new calender has proved of particular value to manufacturers of brushed or napped fabrics who have shied away from the spreading, steaming, and pressing of their cloth for fear of losing the nap.

(N-167)

Doctor-Blade Grinder

A portable doctor-blade grinder for use in roller-printer rooms has been designed by Cheskova Ltd., Mawdsley St., Bolton, England.

The depth of cut and crowning can be adjusted in increments of 0.002 in. while the machine is running.

(N-168)

Color-Matching Device Operates on Standard System

For textile colorists who do not have enough background in physics to properly interpret measurements made by ordinary color-measuring instruments, a new colored-disk device for color-matching work has been developed by Macbeth Corp., Box 950, Newburgh, N. Y.

The practical application of the instrument, called the Macbeth-Munsell Disk Colorimeter, is for specifying standard colors in terms of an established color system.

Several disks, when mounted with only a portion of each disk exposed, blend into a particular color when the entire disk is rotated at a high speed.

The resulting color is varied by adjusting the amounts of each of the disks until the sample has been matched.

(N-169)

16-Ft. Carpet Brush Has 1½-In. Nylon Bristles

A 9-in.-dia. carpet brush, 16 ft. long and weighing only 300 lbs., is manufactured by Industrial Brush Co., Inc., 24 Woodside Ave., Little Falls, N. J. Bristles are 18-mil. dia. nylon, projecting 1½ ins. from the winding strip. The core is a hollow steel tube with pressed-steel ends.

The steel cores are as light in weight as solid metal cores and can be rebristled when the brush has worn down.

(N-170)

Improved Sanforized Machine Smooths Both Fabric Sides

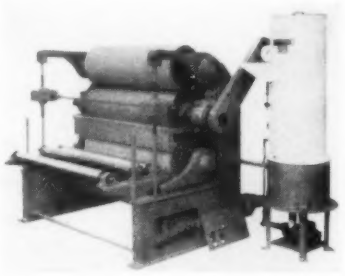
A high-speed, rubber-belt, compressive-shrinkage machine that makes it possible to turn out Sanforized cotton fabrics with a consistently smooth finish on both sides has been announced by Cluett, Peabody & Co., 10 E. 40th St., New York, N. Y. The machines will be built by licensed machinery manufacturers.

To obtain the desired shrinkage, the usual wash tests for determining the potential shrinkage have to be done ahead of time and an evaluation made. The machine is then set to bring the fabric within the 1% residual shrinkage required for the use of the Sanforized label.

Production speeds up to 100 yds. per min. have been obtained on large lots.

The belt, carrying the fabric, is squeezed as it moves between a pressure roll and the metal drum; and the recoil of the belt compresses the damp, warm fabric and preshrinks it to whatever degree is necessary.

(N-171)



Lever-Set Padder Has Driven Middle Roll

A middle-roll drive for 10-ton pressure and a worm-and-wheel elevating mechanism are the outstanding features of the new lever-set padder developed by Cook-P&N Machine Co., Inc., 365 Dorchester Ave., Boston 27, Mass. The driven middle roll eliminates slippage at the nips and also assures equal pressure at both nips.

The chain drive to the top roll has been eliminated. All fulcrum points on the padder are equipped with the company's new knife-edge pins for the elimination of unequal pressure.

(N-172)

New Paper Refines pH Estimates

Short-range indicating papers that divide the pH scale of 0 to 14 into distinctive colors for each half unit and permit estimations to one-fourth unit or closer have been developed by Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa. The user merely moistens a strip of the appropriate paper and, while it is wet, matches it with the color key that is printed on the plastic dispenser.

The papers combine the simplicity and speed of the universal litmus test with the versatility of more-sensitive indicators.

(N-173)

Accessories and Supplies

(*Continued from page 126*)

chine has two separate cams, one for feeding across and lengthwise, the other for thread-cutting action. Other features include an improved thread-trimming device, a double-spring stopping device, and safety brakes.

(N-206)

Order M&W TENTERETTES

A Small Tenter For Your Special Needs

M & W Tenterette: 30", 80" or 100" long, using our No. 12 tenter clip. We build to any maximum width, with either straight or hinged rails. Serves many uses.

These short tenters are made *only* by M & W — one of our specialties, developed to answer special needs in many foremost finishing plants.

We can promptly supply full data — advise you how M & W Tenterettes, and other devices like our Constant Tension Batchers, can fill long-felt needs in your plant that no other machinery satisfies. Write today for information on —

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Ask for details without obligation.

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Versene®

KEEPS DYEING ON THE LEVEL

DIFFICULTIES OF DYEING

Many dyeing difficulties are caused by unsuspected metallic ion contaminants found in the dyes themselves or in the water used to prepare the dyeing solutions. The ions most responsible for these troubles are calcium, magnesium, iron, copper, zinc and tin. By inactivating the offenders and preventing them from taking part in the reactions involved, Versene can keep your dyeing on the level.

CHROME DYEING

Versene in dyebath prevents shade changes caused by traces of iron, copper, zinc and tin.

ACID DYEING

Versene in dyebath prevents shade changes in acid colors caused by iron, copper, zinc and tin traces.

ACETATE COLORS

Versene in the soap bath completely and permanently (without formation of precipitates) softens the water of the bath and so eliminates formation of insoluble calcium, magnesium and iron deposits. Prevents spotting and increases color yield.

VAT DYEING

Versene completely "conditions" the water and removes foreign metallic ions. Prevents shade changes, spotting and streaking.

NAPHTHOL DYEING

Versene Fe_3 works best to prevent the formation of metallic naphtholates which cause crocking, and so keeps them from precipitating onto the goods. Also, used in after-treatment to obtain the greatest fastness properties of colors and to minimize crocking.

VERSENE COMPLEXING POWER GUARANTEED

Versene is made only by the Bersworth Chemical Company under patents and processes originated, developed and operated by F. C. Bersworth. Extremely stable at high temperatures throughout the pH range, complexing power is guaranteed in sample or carload lots. The product is available as several formulas in liquid or powder form. Write Dept. D for Technical Bulletin No. 2 and samples. Chemical counsel for special problems on request.

VERSENE WATER TEST KIT. Tells Total Hardness in 2 minutes. Accurate to 1 grain per gal. Versenate Method. Complete with instructions $5.00 Postpaid.

"Chemistry's most precise chemicals"

BERSWORTH CHEMICAL CO.

FRAMINGHAM, MASSACHUSETTS

WAREHOUSE STOCKS

Chas. S. Tanner Co., Liberty Life Bldg., Charlotte, N. C.
Kraft Chemical Co., Inc., 917 West 18th Street, Chicago 8, Illinois
Siegel Chemical Company, Inc., One Hanson Pl., Brooklyn 17, N. Y.
George Mann & Co., Inc., 251 Fox Point Boulevard, Providence, Rhode Island
Wasatch Chemical Company, 2225 South Fifth East, Salt Lake City, Utah
Barada & Page, Inc., Houston, Dallas, Corpus Christi, New Orleans,
St. Louis, Wichita, Oklahoma City, Tulsa, Kansas City, Mo.
Braun-Knecht-Heimann Co., San Francisco, California
Van Waters & Rogers, Inc., Seattle, Wash. & Portland, Ore.
Braun Corporation, Los Angeles, California

WOW!
I've just seen the new Toledo Products

Watch for BIG NEWS
coming soon from—
TOLEDO
THE LEADER — PIPE TOOLS • POWER PIPE MACHINES • POWER DRIVES
THE TOLEDO PIPE THREADING MACHINE CO., Toledo, Ohio

Bobbin Finish Is Integrated

A new bobbin finish that is virtually indestructible has been perfected by New England Bobbin & Shuttle Co., 31 Crown St., Nashua, N. H. The finish is applied by coating the entire bobbin with a specially developed resin-base thermosetting plastic to which a catalyst is added for hardening.

Cured slowly, the finish becomes a permanent, integrated part of the bobbin itself, satin-smooth and extremely tough.

(N-207)

Magnetic Separators Improved

Magnetic-drum separators have been improved by Eriez Mfg. Co., 1425 Grove Drive, Erie, Pa. The improvements include: (1) changeable sheave sizes for various operating speeds, (2) stainless-steel steels, (3) dust-tight construction, (4) lightweight, rigid cast-aluminum sides, (5) adjustable-feeder assemblies, (6) oil-sealed bearings, and (7) extended discharge ducts.

(N-208)

Waterless Washstation

A waterless washstation with a foolproof dispenser of the company's SBS-30 waterless skin cleanser has been put on the market by Sugar Beet Products Co., Waller and Niagara Sts., Saginaw, Mich. The washstation dispenses the correct amount of cleanser, provides for paper towels to remove the dirt and cleaner, and has a receptacle to receive the waste towels. The unit requires no plumbing and does not have to be bolted to the floor.

(N-209)

Multipurpose Vise for Welding

The Twinner vise, which holds material to be welded, is being manufactured under a British license by Edmands Co., 228 Aborn St., Providence, R. I.

Since one man alone can quickly set up the vise to hold material to be welded, a 50% time saving on ordinary welding jobs is said to be possible.

(N-210)

Protection for Scales

A new device that fits over standard models of weighing scales and protects them completely from foreign matter and corrosion under severe industrial conditions has been brought out by Applied Engineering Co., Box 506, Orangeburg, S. C.

(N-211)

Materials Handling

(*Continued from page 128*)

Clackamas St., Portland, Ore. The 8,000- and 6,000-lb.-capacity models are both gasoline-engine powered and mounted on pneumatic tires.

The AZ-80 is said to be the first heavy-duty 8,000-lb. industrial truck of its kind that can be operated efficiently indoors as well as out.

The XA-60 model is a 6,000-lb.-capacity version of the ZA-80, and it incorporates all the heavy-duty features of the larger truck but has shorter wheelbase, narrower width, and shorter overall length.

(N-239)

Tubular-Steel Pallet

A tubular-steel all-purpose pallet, lighter than wood and priced competitively, has been placed on the market by Econoweld Co., 1805 Webster St., Dayton, Ohio. Two or more stout tubular skid runners are welded and braced to a rectangular angle-iron frame that encases and protects a tough laminated wood deck.

(N-240)

Bundle Truck Has Telescoping Side for Easy Loading

Ease in loading and unloading is provided for by the collapsible side of the bundle truck that is manufactured by Leebaw Mfg. Co., 65 Wayne St., Youngstown 2, Ohio. The side has stops every 6 ins. for partial closing. The truck is of welded steel construction.

Outside dimensions of the line range from 32x42 to 32x62 ins. Height above the 4-in. swivel casters is 55 ins. Three of the models have a vertical-bar construction; three others have 6x6-in. mesh. The floor, of cleated wood, is removable.

(N-241)

Power Generation, etc.

(*Continued from page 135*)

New Card Drive Saves Space, Current

An individual V-belt drive assembly for cotton cards that drives from a patented Leveltex motor pedestal located above the flats is now available from Earnhardt Electric Service, Inc., Box 966, Spartanburg, S. C. The pedestal saves 3 ins. of width per card as compared to tight-and-loose pulley drives.

The drive consists of the following component parts and is sold only as a unit assembly:

- Westinghouse 1½-hp. 1,200-rpm., special-torque, lint-free, sealed-ball-bearing motor
- Westinghouse dustproof combination card controller
- Patented Earnhardt Leveltex card-motor pedestal, adjustable
- Complete V drive
- Switch-mounting bracket and casting
- Guard for cylinder sheave and mounting brackets

(N-295)

Speed Gears Have 13-to-1 Ratio

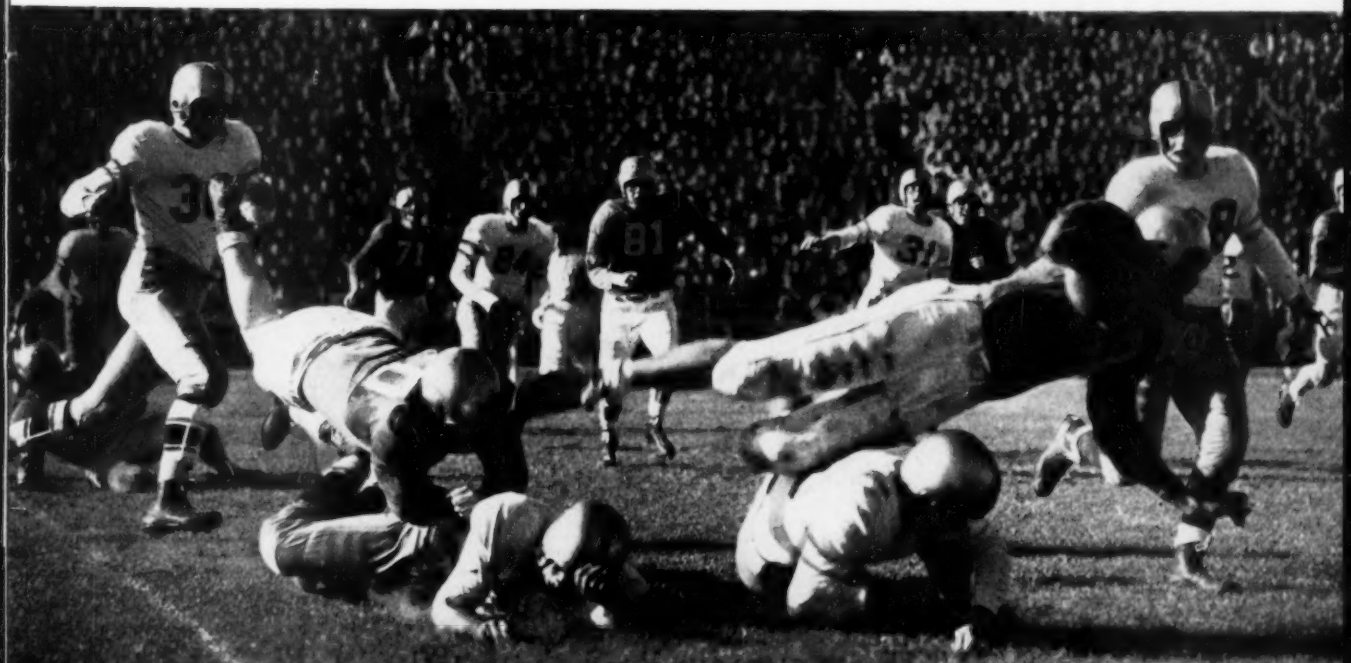
A new 13-to-1 ratio series of shaft-mounted speed-reduction units has been introduced by American Pulley Co., 4200 Wissahickon Ave., Philadelphia 29, Pa. Retaining all the features of the original 20-to-1 series, the new Shaft-King units

STAR PERFORMERS

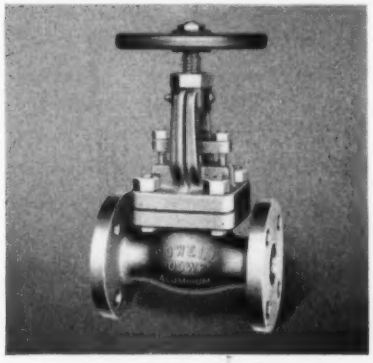
From coast to coast, Powell Valves have won enthusiastic approval. For *every* Powell Valve is a *star for outstanding performance*. They have a record of dependability since 1846.

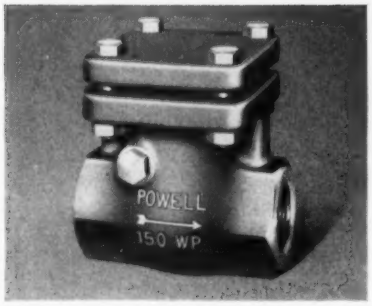
Small wonder that Powell Valves have made such a hit through the years. Powell has probably done more valve research, solved more valve problems and makes more types of valves than any other organization in the world.

We're sure that *you* will be enthusiastic about Powell Valves too once you see how they perform. Following are just a few members of the Powell all-star cast of valves which are available through distributors in principal cities. If a distributor is not located near you, just write us. We'll be pleased to tell you more about these valves—and our complete line.



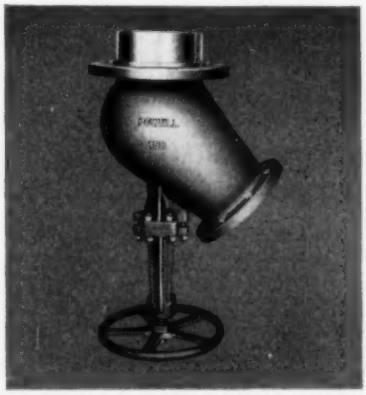
STAR ATTRACTION. Be sure to visit the Powell Valves booth, Number 26, at the 24th Exposition of Chemical Industries, November 30th to December 5th, in Philadelphia at Commercial Museum and Convention Hall.





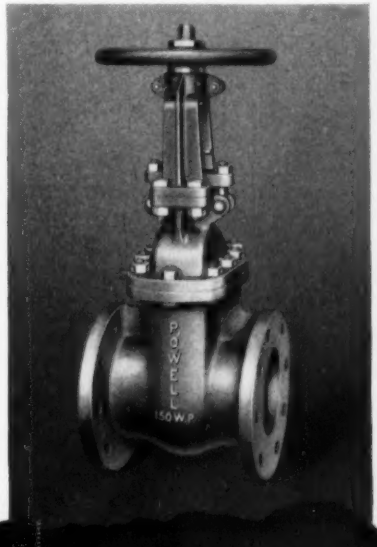
SWING CHECK VALVE *(Fig. 2341)* for 150 pounds W.P. Sturdily built for severe service. Bolted flanged cap. Disc is hung on 5° angle to permit full unobstructed flow. Sizes ¼" to 3", inclusive.

ALUMINUM O.S. & Y. GLOBE VALVE *(Fig. 2445)* for 100 pounds W.P. at 350 F. Stainless steel (18-8) stem, composition disc, integral seat. Stem rises through bronze bushing in upper yoke. Sizes ¼" to 3", inclusive.



FLUSH BOTTOM TANK VALVE *(Fig. 2310)* for 150 pounds W.P. Designed for convenient and fast draining. Disc opens into valve. Also available with disc opening into tank (Fig. 2309).

STAINLESS STEEL O.S. & Y. GATE VALVE *(Fig. 2453)* for 150 pounds W.P. at 500 F. Interchangeable solid or double wedges are precision-fitted and accurately guided throughout entire travel. Sizes 5" to 30", inclusive.



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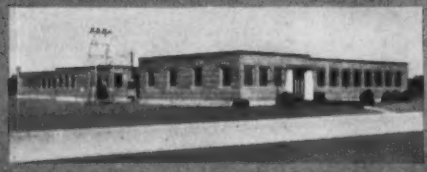

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STEHEDCO and SOUTHERN Products

"Weave the World's Needs"

1-O-12

extend the advantages of V-belt drives to cover a wide variety of slow-speed equipment.

The speed reducers are adaptable to any shaft size up to 3⅛ ins.

(N-295)

Wide-Range Motor Can Be Used on Looms

A wide-range speed and torque generator, Model 302-A, has been put on the market by Industrial Control Co., Wyandanch, L. I., N. Y. It consists of a special motor and control box operating from a 117-v., 60-cps. line.

The 302-A finds applications in process control and textile looms.

(N-296)

New Plastic Bearings

Teflon bearings and gears that are designed to outwear similar nylon products have been developed by Abbott & Riddle, 2413 Federal St., Philadelphia 46, Pa. The new plastic development is not subject to deterioration by the action of any chemical used in the textile industry and has superior frictional qualities.

The higher original cost of the new material is offset by a longer life.

(N-297)

Variable-Speed Drive

Variation of 2:1, 3:1, and 4:1 in the lower speeds is the main feature of a 20- and 25-hp. Speed-Trol power drive put on the market by Sterling Electric Motors, Inc., 5401 Anaheim-Telegraph Rd., Los Angeles, Calif.

The 20-hp. unit has maximum speeds ranging from 176 to 42 rpm., the 25-hp. unit from 176 to 64 rpm. The speed selected is assured by positively adjustable variable-pitch pulleys.

The motors are dripproof and have direct-through ventilation.

(N-298)

LEGAL NOTICE

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION

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By J. A. GERARDI, Vice Pres. & Treas.

Sworn to and subscribed before me this 10th day of September, 1953.

[SEAL] ELVA G. MASLIN
(My Commission expires March 30, 1954)

AATCC Contest Papers

(Continued from page 149)

classes of dyes on Orlon and Dacron alone or in blends with wool.

Shades produced by the vat-color method of padding with latex and color and then reducing closely parallel results with cotton or wool.

Addition of small amounts of cationic agents gives varying results. Vat Blue BF types were helped, but the agents interfered with the unions of several other colors.

Lignin sulfonate (Marasperse) is extremely important in controlling the union of the synthetic and wool. The amount required depends on the dye (little with Vat Navy, a lot with Vat Red G2B).

Reduction at 60° C. for 30 mins. gives the best all-around results.

Tartrate and similar agents improve penetration and brightness by forming acid to improve latex coagulation in drying.

Both water-dispersible pigments and unreduced vat-color pastes are satisfactory in padding before cross dyeing. The intermediate soaping is less necessary with the vat pastes.

Acrylonitrile butadiene latices appear to be superior to styrene-type latices.

Preliminary tests on Acrilan and Dynel indicate that the above results are also applicable to these fibers.

Student Contest

How Resin Treatments Affect Acetate Dyes

► Permel improved both lightfastness and gas-fading fastness, whereas the urea and melamine types alone did not show up as well.

By JAMES POLITO
Fairleigh-Dickinson College

The increasing use of blends containing acetate prompted this study of the effect of resin treatments on the lightfastness and gas-fading fastness of acetate.

Lightfastness

Urea-formaldehyde has a slightly adverse effect in lightfastness.

Melamine formaldehyde also has an adverse effect on lightfastness except on yellow shades, where the effect is beneficial.

The Permel treatment improves lightfastness considerably in most cases.

Gas Fading

Urea-formaldehyde does not help. In some cases (blues and violets) the effect is adverse.

Melamine formaldehyde has a slightly beneficial effect.

Permel has a strongly beneficial effect.

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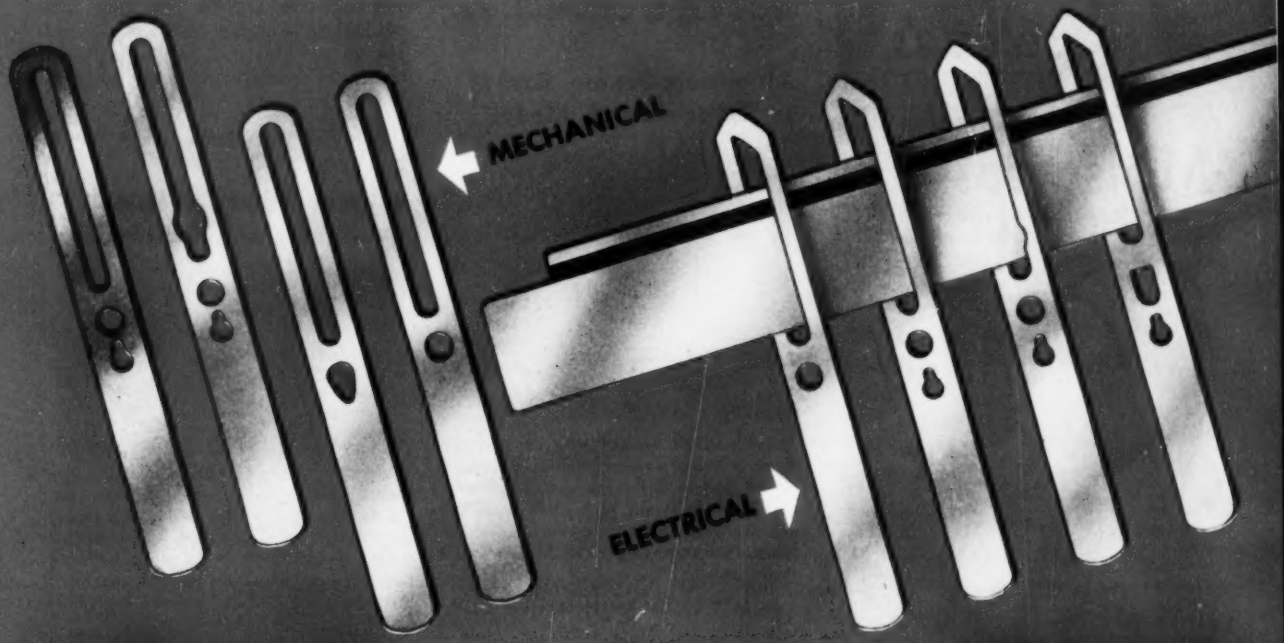
SUPERIOR QUALITY
PROMPT DELIVERY

DROP WIRES • ELECTRODE RODS



IMPROVED EFFICIENCY for INCREASED PRODUCTION!

With STEHEDCO Electrical and Mechanical Drop Wires, be *"Watchmen for the Weaver"*...

Large stocks on hand guarantee prompt delivery of STEHEDCO Supreme Quality Drop Wires in all weights for all sizes of Warp Yarn, supplied in galvanized, copper, nickel finish and stainless steel.

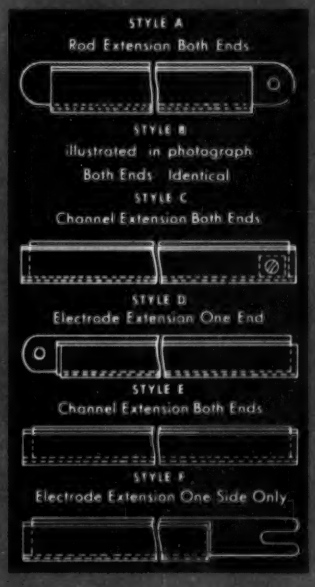
STEHEDCO facilities are more than adequately prepared to serve those mills requiring such services as refinishing *Old Drops* or repunching them for use with Drawing-in machines.

STEHEDCO Electrode Rods are made of Stainless Steel with Fibre Insulation and may be had with special plastic insulation of high dielectric strength, for use with electronic or other sensitive relays.

Ordering is simple:—

When ordering Drop Wire, Mechanical or Electrical, furnish sample or use the diagram illustrated. (to left) Designate style, Width, Thickness, and Finish desired.

When ordering Electrode Rods specify style and length. (see diagram to right).



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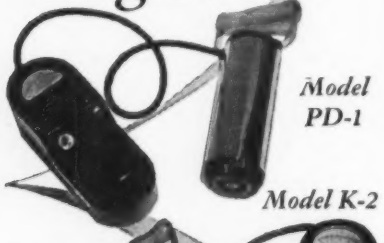
1-0-14

Test moisture content *in* 3 *seconds* with Moisture Register!



Model PD-1

Model K-2

You get *accurate*, almost instant, moisture content readings in **wool, cotton, rayon, nylon—practically any type of textile—** when you use Moisture Register Model PD-1 or Model K-2.

Either model gives you "on-the-spot" readings with guaranteed accuracy. They're simple to operate, require no technical knowledge or skill, weigh only 6 pounds, easily portable.

Model PD-1 tests textiles in loose or compressed forms with 3" penetration. Model K-2 tests cones, beams, rolls and similar forms.

ONE YEAR GUARANTEE!

Use one of these instruments **FREE** for 10 days. No obligation! Prove for yourself that Moisture Register will help you maintain higher standards, iron out production headaches, add to your reputation as a manufacturer of quality products. Fill out coupon, mail today!

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☐ Please send me, *without obligation!* for 10-day free trial, Model.....for use on.....

Enclosed find purchase order to cover trial period.

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STATE

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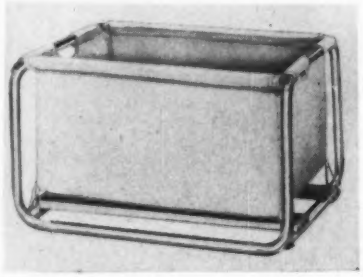
machine is available in models ranging from 1,000 to 5,300 cu. ft. of air per minute. Space requirements are less than half as much as for older models of the same capacity.

Circle T-24 on Reader Service Card

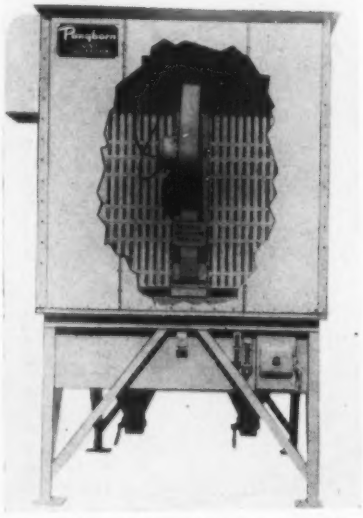
Aluminum-Frame Basket Is Experimental Model



THIS DANDUX BASKET with an aluminum frame is being manufactured on an experimental basis by C. R. Daniels, Inc., Baltimore, Md. Test models will be supplied to mills in any size or shape up to a three-bushel capacity. The canvas body can be supplied in various colors.

Circle T-25 on Reader Service Card

Dust Collector Cleans Itself



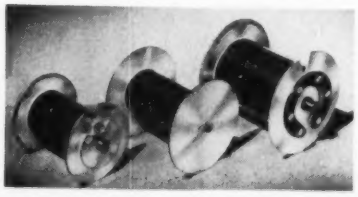
THIS DUST COLLECTOR cleans its filter cloths by reversing the flow of air through a traveling manifold.

A new self-cleaning dust collector is in production at Pangborn Corp., Hagerstown, Md. The collector permits automatic dust collection. It has a constant air volume and suction and a traveling-manifold filter-cleaning system. Models are available with six, five, or four screens.

Existing Pangborn cloth-screen collectors can be converted to a self-cleaning collector by removing the mechanical trapping mechanism, replacing the grid wall, and slightly altering the screen frames and clamping devices.

Circle T-26 on Reader Service Card

Bakelite-Barrel Bobbins Available in Three Styles



ANOTHER STYLE has been added to the molded-bakelite-barrel take-up bobbins put out by Allentown Bobbin Works, Allentown, Pa. Three barrel diameters are now available: 2, 2¼, and 3 3/16 ins. A wide range of package sizes is possible because the traverse and head diameter are not restricted.

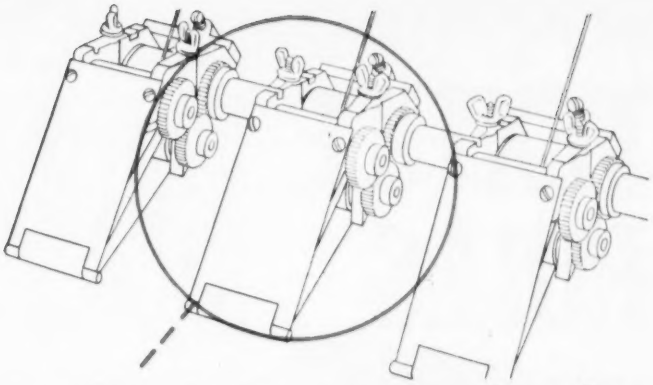
Circle T-27 on Reader Service Card

2,000-Lb. Fork Truck For Platform Loading

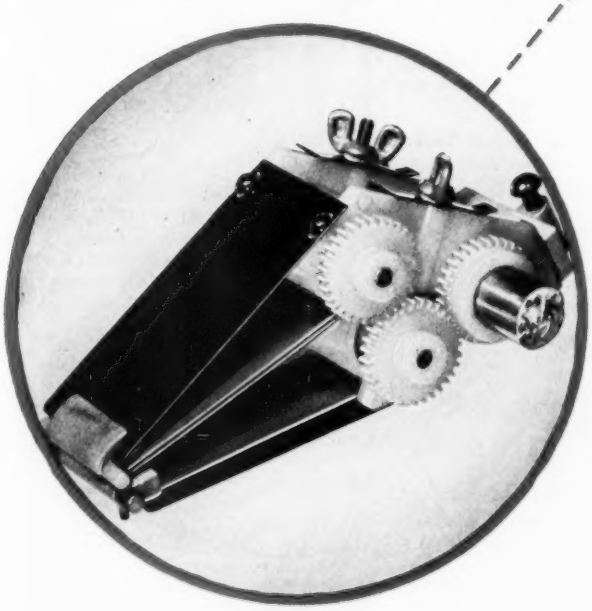
THIS ELECTRIC FORK TRUCK has a 2,000-lb. capacity and is said to be especially suited for platform loading and unloading and for use in narrow aisles. The truck has a short wheel base, one handle that controls four speeds, and an overload-protection device. Manufacturer: Elwell-Parker Electric Co., 4205 St. Clair Ave., Cleveland 3, Ohio.

Circle T-28 on Reader Service Card

(*Continued on page 256*)



Parts of Du Pont nylon stop yarn contamination



in spinning process... need no lubrication, last longer, improve yarn quality

Long draft units, used during spinning to give rough yarn strength and uniformity, have always proved troublesome. The moving parts wore and abraded . . . required oiling. Resultant yarn contamination was a constant problem. Maintenance required complete machine stoppages to remove and replace one unit. Production suffered . . . costs increased.

In designing an improved unit, as illustrated, Macdonald and Sons, Inc., overcame these problems and developed, at the same time, a unit that improved yarn quality. They specified that all moving parts and bearing surfaces be molded of Du Pont nylon. The nylon parts need no lubrication, yet they resist abrasion and actually outwear their counterparts by several times. (Several nylon units were operated continuously for 16,000 hours—equivalent to 8 years of 40-hour weeks—without failure or appreciable wear). Du Pont nylon is tough . . . does not chip or crack . . . is unaffected by temperatures to 250°F. It absorbs shock . . . damps noise and vibration. And nylon's strength and resiliency allow the operator to remove and replace units while the machine is operating—without damage.

Du Pont nylon helps produce a better yarn, free of contamination. Costs are lowered . . . production increased.

Du Pont nylon is serving the textile industry in many ways—contributing to better performance often at lower cost. Perhaps it can help you solve a problem or improve a process. For full information, write: E. I. du Pont de Nemours & Co., (Inc.) Polychemicals Department, Room 1811, Du Pont Bldg., Wilmington 98, Delaware.

Parts molded for
Macdonald and Sons, Inc.,
by Plastic Mold and Engineering Co.,
both of Providence, R. I.

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REG. U.S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY
Polychemicals
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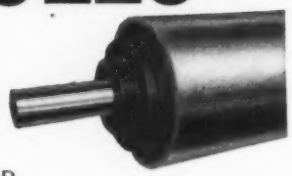
PLASTICS • CHEMICALS

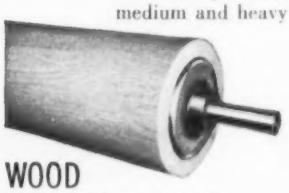
SHAF-TITE®

TEXTILE ROLLS

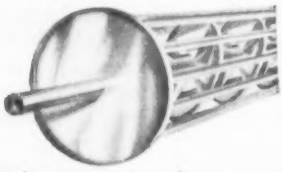


RUBBER Neoprene, natural rubber, Hycar rolls. Light and medium-duty carrier rolls and heavy-duty squeeze rolls.

METAL Steel, brass, aluminum, stainless steel and chromium-plated for light, medium and heavy duty.



WOOD
For all makes of textile washers and mangles: Self-Seal*, White Seal*, Anchor Seal* solid rock maple rolls. For fulling mills: wood lag rolls and wood lags. General purpose: Shaf-Tite, solid wood or kiln-dried wood carrier rolls.
*Trademark



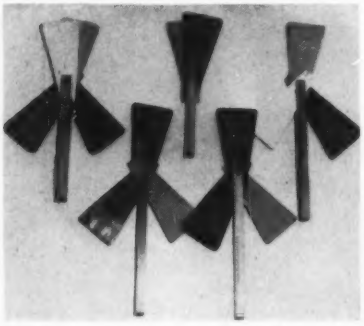
REELS
Patented girder-type construction; stainless steel reels up to 20 feet in length for any make of machine. Round, hump, triangle, and oval.

FREE! Send for 64-page catalog. Permanent reference work for all rolls. Includes inquiry dimension sheets, care of wood and rubber rolls, and engineering data. RODNEY HUNT MACHINE CO., 54 Maple St., Orange, Mass., U.S.A.

RODNEY HUNT®
INDUSTRIAL ROLL DIVISION
Manufacturing Engineers Since 1840

(Continued from page 254)

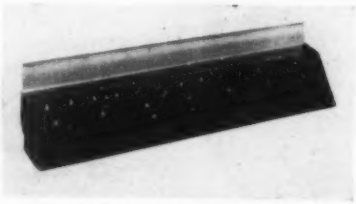
Loom Flags Are Patented



LOOM FLAGS made by G. F. League Mfg. Co., New Buncombe Rd., Greenville, S. C., are available in two to four colors. The company has recently been issued patents on these flags. It is reported that nine different operators can be signaled with different arrangements of a four-color flag.

Circle T-29 on Reader Service Card

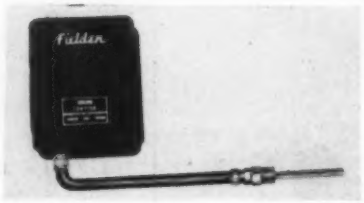
15- and 16-In. Needle Bars Available on Reading 100



NEEDLE BARS for Reading 100 full-fashioned knitting machine are now available in 14-, 15-, or 16-in. lengths. Only 14-in. bars were available before. Machines equipped with the longer bars will be ready for delivery the first of the year. The Reading equipment is made by Textile Machine Works, Reading, Pa.

Circle T-30 on Reader Service Card

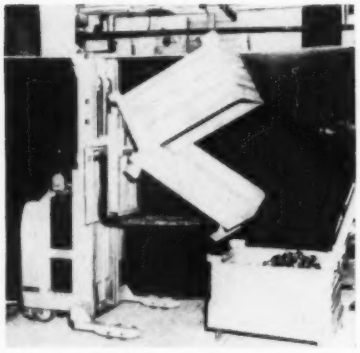
Electronic Level Control Gives Close Control



THIS LEVEL-CONTROL INSTRUMENT uses one radio tube to give a close control over any material that flows. It operates from 115-v., 60-cycle power supply. The electrodes can be sheathed in a corrosion-resistant material, and the electrodes are available for use with pressures up to 2,000 psi. and temperatures to 1500° F. Manufacturer: Fielden Instrument Div., Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia, Pa.

Circle T-31 on Reader Service Card

Check This Dump Box



A DUMP-BOX ATTACHMENT for rider-type, narrow-aisle electric trucks has been announced by The Raymond Corp., Greene, N. Y. The box is controlled from the driver's platform, and it is activated from a separate hydraulic ram.

Circle T-32 on Reader Service Card

Pusher Attachment Makes Truck Loading Easier

THIS HYDRAULIC PUSHER is said to eliminate the manual loading of trucks or railroad cars. After the load is positioned, the pusher (controlled by a lever on the truck) goes forward at the same speed the truck backs away; so the load is left in the same spot. The pusher is said to be easily attached or removed. Manufacturer: The Yale & Towne Mfg. Co., Materials Handling Div., Philadelphia, Pa.

Circle T-33 on Reader Service Card

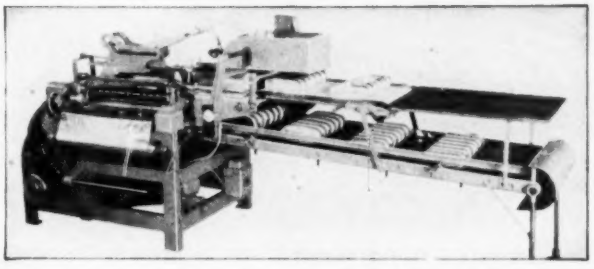
HAYSSEN MFG. COMPANY

Since 1910, One of the World's Largest Manufacturers of Wrapping Machines

DEPT. TW-11, SHEBOYGAN, WISCONSIN

WRAP ALMOST ANY SHAPE OR SIZE PRODUCT AUTOMATICALLY WITH A HAYSSEN ...SAVE HALF YOUR MACHINE COST

ADD EXTRA BUY APPEAL TO
Cheese Cloth, Curtains, Bolts of Fabric, Handkerchiefs, Hosiery, Pillow Cases, Sheets, Shirts, Towels, Underwear, Yarn ...practically any textile product.



● The Hayssen wraps 35 or more packages per minute with one operator . . . gives EXTRA PROTECTION FOR YOUR PRODUCT. You'll have a neat, tight, uniform package with electric-eye registration of the printed overwrap.

Hayssen Wrapping Machines handle heat-sealing cellophane, pliofilm, polyethylene and paper. These textile machines wrap the product by itself or with cartons, trays, flat cards and u-boards as required . . . handle the most delicate, fragile or fluffy materials.

Hayssen machines are unmatched in performance, low first cost, overall economy of operation and maintenance. Many Hayssen units are in use today that were purchased over 20 years ago.

WRITE for folder on Hayssen Wrapping Machines. Tell us your wrapping problems ... we have the answer.

IT PAYS TO WRAP THE HAYSSEN WAY

Hayssen MFG. COMPANY

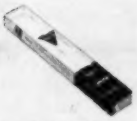
BAKED GOODS

MEATS

TEXTILES

VEGETABLES

FROZEN FOODS

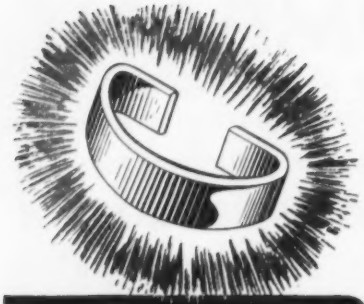

ODD SHAPES

CANDY

ICE CREAM

DAIRY

PAPER



DARY
Ring Travelers

WELCOME TRAVELERS!

The welcome sign for Dary Ring Travelers has been up in spinning and twisting rooms for well over 50 years!

Dary users know they can depend on steady performance regardless of the tough tests they give Dary Travelers.

So, welcome your Dary Ring Traveler man the next time he stops by!

Always specify
DARY Ring Travelers

THE DARY RING TRAVELER CO.
TAUNTON, MASSACHUSETTS
LINDSEY E. PHILLIPS, TREASURER, TAUNTON, MASS.
JOHN E. HUMPHRIES, BOX 843, GREENVILLE, S. C.
JOHN H. O'NEILL, BOX 720, ATLANTA, GA.
JAMES H. CARVER, BOX 22, RUTHERFORDTON, N. C.
CRAWFORD "JACK" RHYMER, BOX 2261, GREENVILLE, S. C.

News OF THE MONTH

MODERNIZATION CONFERENCES

Speaking before the Southern Yarn Spinners Association, F. W. Howe, president of the American Textile Machinery Association, said that he was ready to appoint a representative committee from the ATMA to work with a similar committee from any group in the textile industry on the problems of an industrywide program of modernization. These problems include better tax structures, depreciation rates, and amortization programs.

GINNING-SPINNING STUDY

The National Cotton Council's Industrywide Committee on Cotton Quality recommends that a committee be set up to study the effect of ginning on the spinning quality of cotton. This committee would examine actual cases and obtain documentary evidence on the relationship of ginning to spinning quality.

The council also points out that more bales going into lengthy storage will increase lint contamination from bale-tie rust. A satisfactory bale-tie coating is needed.

WOOL TARIFF INCREASE REJECTED

The plea for an 80% boost in tariffs on wool-fabric imports, made to President Eisenhower by the National Association of Wool Manufacturers, has been rejected by Mr. Eisenhower.

USDA RESEARCH ON WOOL

The Department of Agriculture is conducting research on wool that may eliminate the scratchiness of wool, make it permanently mothproof, and prevent light-colored wools from turning yellow. Information on this research program was recently given to representatives of the wool industry at a two-day meeting held in Washington.

ELASTIC-WEBBING STANDARDS

Tests are under way at the American Institute of Laundering, Joliet, Ill., and the Elastic Fabric Manufacturers Institute, Inc., New London, Conn., in an effort to establish a minimum performance standard for elastic used in men's underwear.

TWENTY STOCKINGS

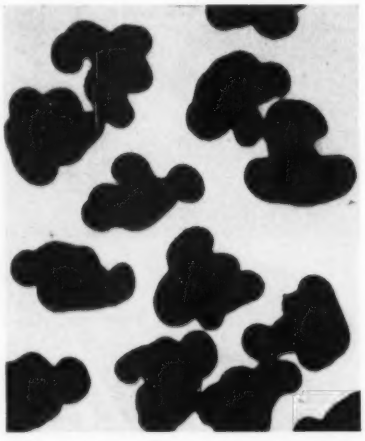
Ten pairs of stockings are necessary for the American woman to dress herself in current fashion because of the trend toward color coordination. If more women would cooperate, the future for the hosiery industry would be indeed bright, according to the National Association of Hosiery Manufacturers.

EMPHASIS ON FOREMEN

American industry is entering into a new phase of personnel administration, according to Lawrence A. Appley, president of American Management Association. The new phase will be a concentration on developing "well-trained, hard-hitting, and effective foremen with a deep appreciation of human values and great skill at securing high productivity and morale from workers."

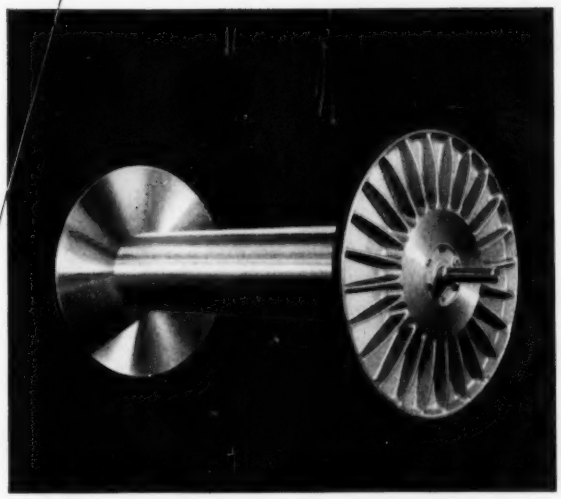
SAFETY ON AND OFF THE JOB

Safety is industry's "potentially greatest of all means of cost saving



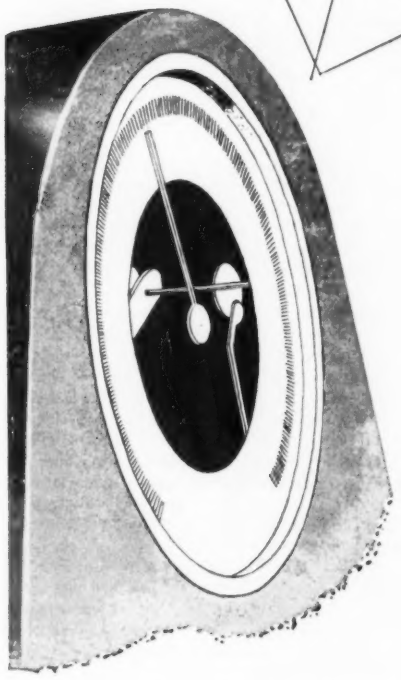
IMPROVED RAYON

HARD-CORE TIRE-CORD FIBERS are going to be produced by several rayon companies from a new sulfite pulp, Rayocord-X, which is being produced by Rayonier, Inc. Tenacity of the tire cord will be over 3 gms. per den. Regular yarn made from the new pulp will give fabrics of increased strength and workability.



severe test

proves strength of new HAYES *aluminum nylon beam*



On May 26, 1953 in a test made by the Engineering Department of Swarthmore College, this Hayes Aluminum Nylon Beam withstood a load of 263,000 pounds. With continued loading, the head casting cracked — even then — the beam still held a load of 80,000 pounds, which is considered sufficient for removal of nylon yarn without loss of material. There was no failure of the threads holding head to barrel.

The NEW beam is the only aluminum section beam being produced primarily for nylon and includes these features which make it of particular interest to the textile industry:

— available in 30″ and 32″ head diameters.
— heavy center hub construction, with 24 reinforcing ribs.
— ½″ minimum wall, high strength aluminum barrel.
— adaptable for use with all current makes of warpers.

This beam is merely another instance of Hayes long experience in the manufacture of light weight metal beams. Its greater head strength, increased rigidity, permanent running balance, and glass-smooth, rust-proof surfaces exist in all Hayes beams. Write today for complete information on Hayes beams.

HAYES INDUSTRIES, INC.
JACKSON, MICHIGAN

THE WORLD'S LARGEST PRODUCER OF LIGHT METAL BEAMS

Southern Representative:
R.E.L. Holt, Jr. & Assoc., Greensboro, N. C.

Eastern Representative:
J. Paul Laird, Philadelphia, Penn.

New England Representative:
J. S. Fallow & Co., New Bedford, Mass.

Canadian Representative:
J. S. Fallow & Co., Montreal, Canada

For more information, write direct or use Reader Service post card.

AT YOUR SERVICE

SPECIALIZED ENGINEERING

SPECIALIZED EXPERIENCE

SPECIALIZED MACHINERY FOR TWISTING BUNCHING STRANDING FORMING AND LAYING IN THE TEXTILE • WIRE CORDAGE AND MANY OTHER INDUSTRIES

WRITE TODAY. YOUR INQUIRY WILL GET PROMPT ATTENTION

HASKELL-DAWES MACHINE CO., INC.

2231 E. ONTARIO ST.
PHILADELPHIA 34
PA.

and profit increasing," J. Devey Dorsett, Association of Casualty & Surety Companies, told the Maine State Safety Conference. "The machine that is left idle because Joe, its operator, was injured in a traffic accident is just as unproductive as though Joe had been injured by the machine itself."

CLINICS ON FLOOR CLEANING

A series of one-day sessions on floor-cleaning techniques is being conducted by Industrial Sanitation Counselors, 2934 Cleveland Blvd., Louisville, Ky. Maintenance men, safety directors, and management men are invited to attend. The sessions will be held in various cities in the Middle West during November and December, the Far West in January, and the South in February.

RAYON FLOUR BAGS

Rayon bags for packaging flour, feed, and other bagged products are being manufactured by Bemis Bro.

NAVY DEVELOPS TESTER

THIS PILLING TESTER was developed by the U. S. Navy to be used in its program of research and development of Navy uniforms. Jack S. Press, inventor, examines the machine, which develops a combination rolling and twisting motion.

AERIAL TOUR OF MACHINE SHOPS

A GROUP OF JOURNALISTS representing textile and other industrial publications, general business journals, and newspapers saw improved textile machinery and improved methods of making it demonstrated late in September by the American Textile Machinery Association. Taken by plane to Universal Winding Co., Providence, R. I.; Saco-Lowell Shops, Biddeford, Me.; Draper Corp., Hopedale, Mass.; Whitin Machine Works, Whitinsville, Mass.; and Crompton & Knowles Loom Works, Worcester, Mass., the delegation was shown samples of impressive postwar progress in textile machine shops and their products that were said to be representative of the accomplishments of the 52 firms constituting the membership of the association.

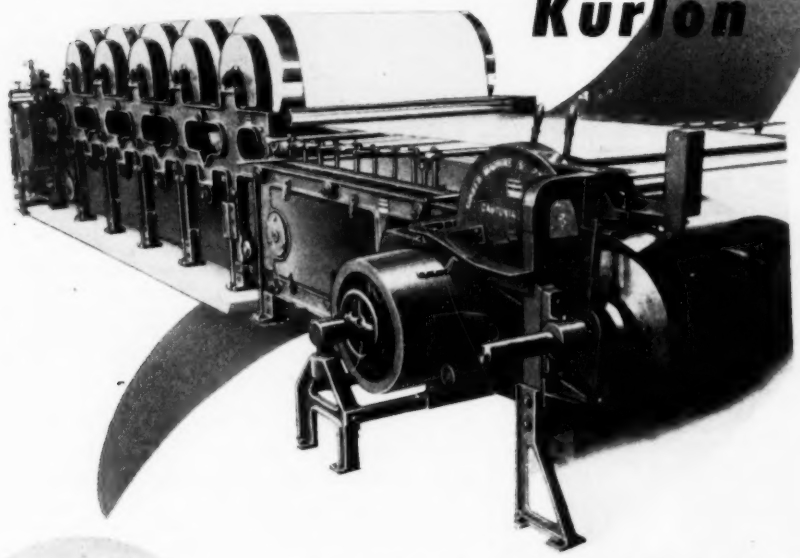
During discussions with the machinery-company executives, the journalists were informed that the recession in the textile industry proper, which extended from 1951 well into 1952 and continues to linger in the price structure of the industry and in the current activity of several of its branches, has appreciably reduced the demand for machinery. Although spotty improvement has been noted by some machinery companies recently, many feel that they must diversify their products by building equipment for other fields than textiles.

A threat to the technological progress of the textile industry is seen in the fact that the mills are curtailing many research projects and, through failure to buy, are reducing the financial ability of the machine shops to continue their extensive research expenditures. One possible solution to the problem suggested at the meeting, as of benefit to both the mills and the shops, was an appeal to the government for higher depreciation rates.

The editors were told that the textile-equipment exhibition set by the association for next April in Atlantic City, which will be the largest ever held, should demonstrate to the textile world how the recent great strides in technology can be applied now to reduce mill costs and improve the quality of textile products.

But Will it Size

Fibron
Duratate
Kurlon



Cocker 9-Cylinder High Speed Slasher for all types of yarn

Mills which installed Cocker 9-Cylinder High Speed Slashers many years ago saved themselves a great deal of trouble and expense . . . because these all-purpose slashers have been able to handle every new fibre which has been introduced since then. If you buy a Cocker 9-Cylinder Slasher today the chances are 99 to 1 that it will efficiently handle any fibre which may be developed for a long time, whether it be called Fibron, Duratate, Kurlon, or by any other name.

And for today's use, the Cocker 9-Cylinder Slasher is years ahead of any other. It has every feature of accepted value, plus others which are found on no other slasher. Its exclusive Differential Compensating Control permits continuous high speeds without heating of Friction. Its exclusive Cocker Friction produces hard loom beams with 20% to 25% more yarn per loom beam.

The Cocker 9-Cylinder Slasher gives you the finest in slashing today . . . plus assurance that it will meet tomorrow's needs. Write, wire, or telephone for complete information.

Also made in 5, 7, 11, and 13 cylinders for specialized uses.

THE LEADER
COCKER
AROUND THE WORLD

Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

For more information, write direct or use Reader Service post card.

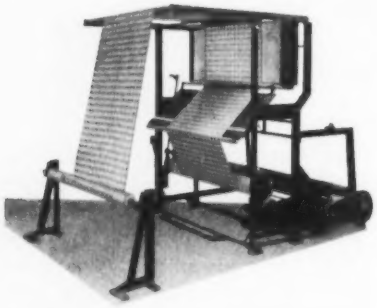
No Complaints

ABOUT YARDAGE DOESN'T ALWAYS MEAN WHAT YOU THINK IT DOES

Because the measuring drum on their jerrymade measuring and inspecting machine was ⅛" oversize, a mill for a long time had been giving customers an extra 3/16" of cloth free with every yard sold them. The total amount given away mounted to hundreds of thousands of yards annually.

It could just as easily have been the other way round. They could have been delivering less than customers paid for and wondering why good customers had stopped buying from them.

For absolutely accurate measurement of cloth in your clothroom, have



HERMAS MEASURING EQUIPMENT and HERMAS SERVICE

to see that every one of your clothroom machines is efficient and accurate. This will mean:

- **Better finished cloth**
- **More salable cloth**
- **Safety for your profits.**

HERMAS
Machine Company
Warburton Avenue
Hawthorne, New Jersey

NEWS *of the Month* ..... (Continued)

QUALITY CONTROL MEETING

THESE QUALITY-CONTROL MEN discussed the use of electronic testing equipment at a recent meeting held at Georgia Tech. Members of the panel, left to right: James Wheeler (Canton Cotton Mils), Vernon Hassett (Martha Mills), William Waters (ITT), James Denmark (Pepperell Mfg. Co.), and David Gashill (Brush Electronics Co.). Mr. Wheeler reported that Canton improved yarn quality 3 to 7% by checking spinning spindles that were producing yarn with below-average uniformity.

Bag Co. and Chase Bag Co. These bags are being made in prints, stripes, and solid colors for women who make dresses and things from the bags. A consumer promotional campaign is being conducted in behalf of the rayon bags.

NEW DACRON STAPLE

Dacron staple with a ribbon-like cross section has been developed by Du Pont. The only difference between the new staple and the regular round-cross-section staple is the method of extrusion. Applications are said to be woolen-blend suitings and knitwear. Experimental production will be in 3-, 4½-, and possibly 6-den. fiber. Price will not change.

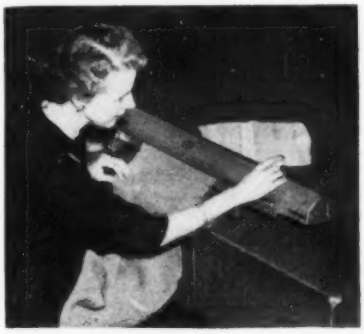
INVENTORIES DOWN

Going into the fourth quarter of the year, the textile industry as a whole had a backlog of orders materially larger than last year, according to a bulletin of the National Bank of Commerce, Memphis, Tenn. Inventories and stocks are said to be about half as large as they were a year ago.

TARIFF PROTECTION

Northern textile manufacturers voted unanimously in favor of a resolution calling for tariffs to protect the American textile industry from injury and unemployment caused by low-wage foreign competition.

The resolution was passed at the joint meeting of the Northern Textile Association and the National Association of Cotton Manufacturers. Wages in this country are said to range from 200 to 1,200% higher than in foreign textile industries.



OUT-OF-THE-MILL KNITTING

A HOME KNITTING MACHINE has been put on the American market by an Australian firm. The machine is said to knit a sweater in 5 hrs., as compared to a week by hand. It is said to knit all numbers of wool and cotton yarn. Price is about $50. Knitting-mill men, however, are confident the machine will not displace their products.

Ideal's Flyer Tune-Up Service Saves Money 2 Ways

By the time your flyers ride up or down, or wobble from side to side so badly that you decide to have them reconditioned, you have already lost a lot of money. Such operation causes weak places in the roving, builds bobbins unevenly, and causes costly wear on spindle tops, flyer legs, and other parts.

A Stitch in Time

Don't wait until your flyers *must* be repaired . . . and have already produced many pounds of inferior roving . . . and caused hours of down-time. Use Ideal's Flyer Tune-Up Service *before* they wear out and you will get perfect production as well as put off the expense of flyer repairs for a long time. This service includes Nose Straightening, Slot Gauging, Blocking Flyers and Pressers . . and Selecto-Speed* Balancing *which balances all of your flyers for the exact speed at which you run your frames.*

The cost of Ideal Tune-Up Service is small. The benefits in longer life for spindles and flyers, in better quality roving and better built bobbins, and in reduced down-time is great. Don't wait until your flyers *need* repairs. Send us your flyers for an Ideal Tune-Up job now. If you wish, we will supply you with extra flyers while yours are being serviced.

Save on Production...
Save on Equipment...
Start Regular Tune-Up Service Today.

*Patented

Ideal Machine Shops, Inc.

Bessemer City, N. C.

29th Year of Continuous Service to Textile Mills

For more information, write direct or use Reader Service post card.

IVES

GIVES LONGER WEAR BY BETTER

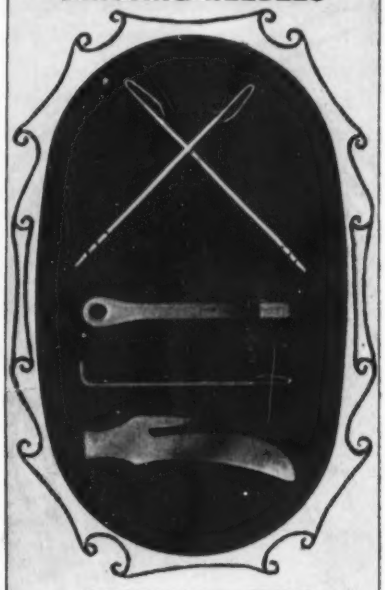
Spring-back

IN

TRICOT

SPRING BEARD

KNITTING NEEDLES



No matter what type of Spring Beard Knitting Needles you want—for circular, full-fashioned or tricot knitting machines . . .

IVES MAKES THEM

Also, Sliders, Sinkers, Jacks, Guides, Sley Points, Looper Points, Transfer Points or Quills, for Spring Beard and Latch Needle knitting machines.

THE LOYAL T.

IVES

COMPANY, INC.

Established 1872

NEW BRUNSWICK, N. J.

NEWS *of the Month* . . . . . (Continued)

UNION WORKLOAD

The TWUA of the CIO has published a 215-page book called "Textile Workers' Job Primer." The book was written to help train textile workers and union leaders in handling workload problems; it will, according to Emil Rieve, president, "help union representatives to produce facts that will expose the shortcomings of the techniques favored by management."

ORLON-FLEECE-FABRIC SHRINKAGE

Dry-cleaning-shrinkage tests (five successive cleanings) on Orlon-fleece fabrics conducted by the Textile Analysis Dept. of the National Institute of Drycleaning have shown that blue and tan fabrics have excessive shrinkage, pink fabrics give better results, and white fabrics better still.

Color-fastness of the Orlon-fleece fabrics was reported to be good during dry cleaning.

Textile Calendar

AATT, monthly meeting, Builders Club, New York, Nov. 4.

ASQC, Textile Div., Chattanooga, Tenn., Nov. 5 to 7.

AATCC, Northern New England Sect., LTI, Lowell, Mass., Nov. 6.

AATCC, Western New England Sect., Rapp's Restaurant, Shelton, Conn., Nov. 6.

AATCC, Mid-West Sect., Hotel Bismarck, Chicago, Ill., Nov. 7.

Refrigeration and Air Conditioning Exposition, Public Auditorium, Cleveland, Ohio, Nov. 9 to 12.

Training Course in Statistical Textile-Quality Control, Georgia Institute of Technology, Atlanta, Ga., Nov. 11 to 19.

TRI, annual meeting, Commodore Hotel, New York, Nov. 12 and 13.

AATCC, New York Sect., Swiss Chalet, Rochelle Park, N. J., Nov. 20.

N. C. State Textile Alumni Conclave, School of Textiles, N. C. State College, Raleigh, N. C., Nov. 20 and 21.

Exposition of Chemical Industries, Commercial Museum and Convention Hall, Philadelphia, Pa., Nov. 30 to Dec. 5.

ASME, national meeting, New York, Dec. 1 to 3.

AATT, monthly meeting, Builders Club, New York, Dec. 2.

Sheeting and Coated Fabrics Div., Society of the Plastics Industry, Commodore Hotel, New York, N. Y., Dec. 3 and 4.

AATCC, Northern New England Sect., Faculty House, MIT, Cambridge, Mass., Dec. 4.

AATCC, Phila. Sect., Kugler's Restaurant, Philadelphia, Pa., Dec. 4.

AATCC, R. I. Sect., annual meeting, Sheraton-Biltmore Hotel, Providence, R. I., Dec. 4.

AATCC, South Central Sect., Patten Hotel, Chattanooga, Tenn., Dec. 5.

AATCC, Western New England Sect., Rapp's Restaurant, Shelton, Conn., Dec. 11.

1954

AATCC, Phila. Sect., Kugler's Restaurant, Philadelphia, Pa., Jan. 15, 1954.

Plant Maintenance Conference and Exposition, Chicago, Ill., Jan. 25 to 28, 1954.

AATCC, New York Sect., Hotel Statler, New York, Jan. 29, 1954.

National Cotton Council, annual meeting, Biltmore Hotel, Atlanta, Ga., Feb. 1 and 2, 1954.

ASQC, Textile Div., technical meeting, School of Textiles, N. C. State College, Raleigh, N. C., Feb. 4 to 6, 1954.

AMA, personnel conference, Palmer House, Chicago, Ill., Feb. 15 to 17, 1954.

Cotton Research Clinic, The Carolina, Pinehurst, N. C., Feb. 17 to 19, 1954.

Phi Psi, 51st annual convention, The Carolina, Pinehurst, N. C., Feb. 25 to 27, 1954.

AATCC, New York Sect., Hotel Statler, New York, Feb. 26, 1954.

Alabama Cotton Manufacturers Assn., annual convention, Hotel Buena Vista, Biloxi, Miss., March 18 to 20, 1954.

CMA of Georgia, annual convention, Boca Raton Hotel Club, Boca Raton, Fla., April 7, 8, and 9, 1954.

ACMI, annual meeting, Jung Hotel, New Orleans, La., April 22 to 24, 1954.

AATCC, New York Sect., Swiss Chalet, Rochelle Park, N. J., April 23, 1954.

AMA, manufacturing conference, Hotel Statler, Cleveland, Ohio, April 26 to 28, 1954.

American Textile Machinery Exhibition, sponsored by American Textile Machinery Association, Atlantic City Auditorium, Atlantic City, N. J., April 26 to 30, 1954.

The Fiber Society, spring meeting. Institute of Textile Technology, Charlottesville, Va., May 5 and 6, 1954.

NACM, 100th anniversary, Somerset Hotel, Boston, Mass, May 19 and 20, 1954.

AATCC, New York Sect., Swiss Chalet, Rochelle Park, N. J., May 21, 1954.

SCTMA, annual convention, The Cloister, Sea Island, Ga., May 27 to 29, 1954.

STA, annual convention, Ocean Forest Hotel, Myrtle Beach, S. C., June 10 to 12.

Canadian Textile Seminar, Queen's University, Kingston, Ontario, Sept. 9 to 12, 1954.

AATCC, national convention, Atlanta Biltmore Hotel, Atlanta, Ga., Sept. 15 to 18, 1954.

Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 4 to 8, 1954.

CONSISTENT QUALITY at MAXIMUM SPEED

7′ and 5′ INSULATED CYLINDERS

POSITIVE DRIVE

Heavy-duty ANTI-FRICTION BEARINGS

Improved Model 50 SIZE BOX

TENSION CONTROLS

Variable Speed HEAD ENDS

Advanced CREEL Design

Because of its many advanced features, special equipment and greater capacity, this improved model WPF&M 2-Cylinder Slasher can produce an output of correctly sized yarn, free of excess stretch, at maximum speed.

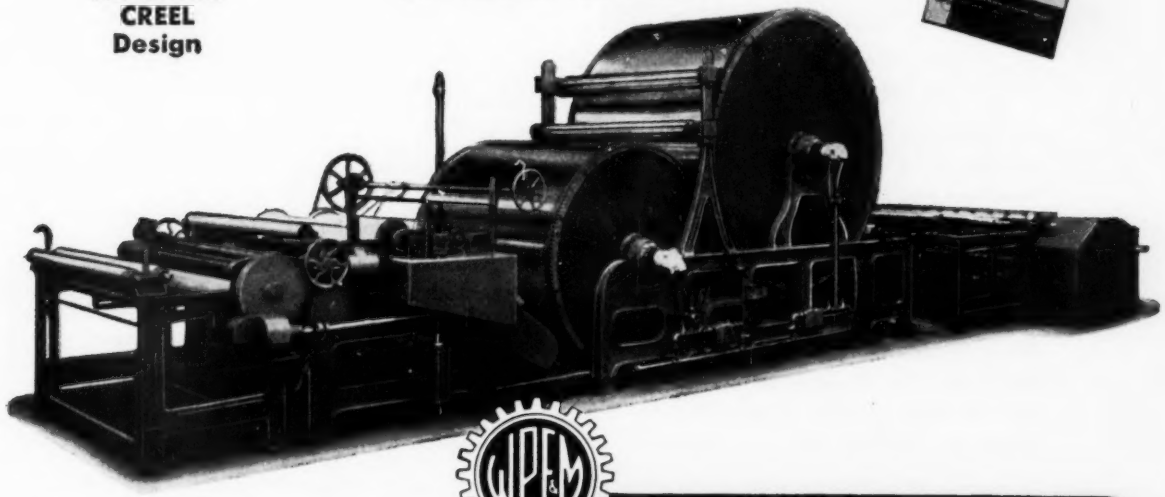
The entire slasher, from creel to head end, has been improved and modernized and is now designed and constructed for fast, uninterrupted operation at low cost.

Modern tension, pressure and temperature controls, positive and variable drives combined with the WPF&M advanced-type Size Box and Head End assure top-quality production day after day . . . eliminate costly guesswork and waste.

Whatever your mill requirement—from the lightest gauze to the heaviest sheeting—this versatile WPF&M Slasher can be adapted to fit your needs.

Let us show you, without obligation, how modern slashing equipment and methods can step up your production and quality at reduced operating costs.

Free Booklet "Cotton Slashers" describes the many special features found only in the WPF&M Slasher. MAY WE SEND YOU A COPY?



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STANDARD 2 and 3 CYLINDER SLASHERS
MULTI-CAN SLASHERS
WPF&M HI-SPEED 4 CYLINDER SLASHERS
CALLAWAY SAMPLE SLASHER

SLASHER MODERNIZATION EQUIPMENT

HI-SPEED HEAD ENDS WITH STRETCH CONTROL
STANDARD WPF&M HEAD ENDS
MULTI-MOTOR DRIVES and CONTROLS
TEMPERATURE, SPEED and TENSION CONTROL DEVICES
HI-SPEED SIZE BOXES
MODEL 50 SIZE BOXES
STANDARD SIZE BOXES
SIZE KETTLES and EQUIPMENT

WEST POINT FOUNDRY & MACHINE CO.

WEST POINT, GEORGIA

 For more information, write direct or use Reader Service post card.

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Made by New Fullergript Blade Sweep

5 Times the Wear of a Broom But Comparable in Price

A Fullergript Blade Sweep lasts 5 times as long as an ordinary broom . . . and then you replace only the part that wears down. Yet the part you replace—the Fullergript strip—costs little more than a new broom.

You can "plow" with Fullergript Blade Sweeps without breaking the filaments. The filaments are in to stay, too. Use Blade Sweeps in pairs for large open areas or singly for close work.

For further information call the Fuller Industrial Representative listed in your telephone directory or write The Fuller Brush Co.

Manufactured, Guaranteed and Sold by...

INDUSTRIAL Fuller BRUSH CO. DIVISION

3594 MAIN STREET • HARTFORD 2, CONN.

Power driven brushes, Factory & Institutional cleaning tools, Waxes & Detergents

NEWS ABOUT Suppliers

EQUIPMENT SUPPLIERS

Barber-Colman Co., Rockford, Ill., Automatic Control and Uni-Flo Divs., have opened two new factory branch offices, one in Indianapolis, Ind., and the other in Omaha, Neb. Manager of the Indianapolis office is Don Horock. Tom Peterson will manage the Omaha office.

Borg-Warner Corp., Chicago, Ill., Pesco Products Div., has made Paul W. Brannon vice president of manufacturing. The Marvel-Schebler Products Div. has named three executives: S. S. Meadows, vice president and manager of the transmission department; Glen Bamberger, works manager of the carburetor and aircraft department; and Edward Walsh, assistant chief industrial engineer of the carburetor and aircraft department.

Carpenter Steel Co., Alloy Tube Div., Union, N. J., has made Nields B. Haas Mid-Eastern regional sales manager. George A. Davis has been appointed New England sales representative.

Clark Equipment Co., Buchanan, Mich., has moved the office of John J. Shand, Southeastern regional sales manager, from Norfolk, Va., to 161 Spring St. Bldg., Atlanta, Ga.

Cleaver-Brooks Co., Milwaukee, Wis., has made Elmer H. Wegner, formerly acting works manager, general manager of manufacturing.

Conoflow Corp., Philadelphia, Pa., has promoted the following members of the administrative staff: Ralph G. Holben, former production manager, to plant manager. Horace C. Shuman, former assistant to Mr. Holben, to production manager. Harold W. Bonekat has been named purchasing agent.

Draper Corp., Hopedale, Mass., has announced that its sales engineer, Richard P. Newell, has returned from Europe, where he spent the past two years.

R. W. VAN TUYLE has been elected a director of Emery Industries, Inc., Cincinnati, Ohio, and has been made vice president in charge of manufacturing.

Robert Gair Co., Inc., New York, N. Y., has appointed Francis J. Sullivan a special sales representative for the container division.

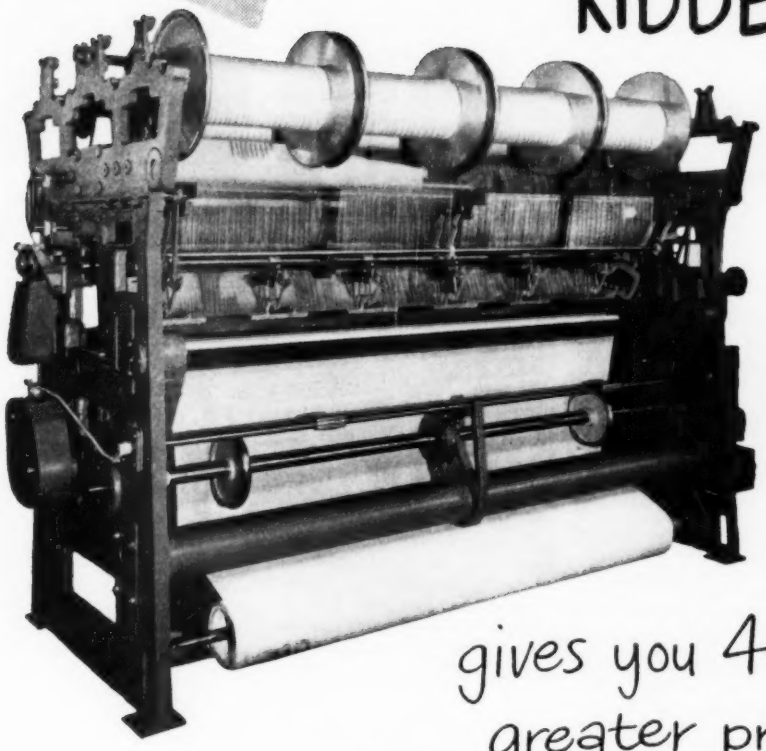
H. F. Livermore Corp., Boston, Mass., has made Raymond M. LaFortune Canadian sales representative. His address is 258 rue Beaudoin, St. Henry, Montreal.

Mona Industries, Inc., Paterson, N. J., has appointed Ralph Gossett and Co., Greenville, S. C., as its representative for North Carolina and Sullivan County of Tennessee.

National Ring Traveler Co., Pawtucket, R. I., has announced that The Sterling Ring Traveler Co., Fall River, Mass., has merged with National as its Sterling Div. R. V. Borden, president and treasurer of Sterling, will remain with National, as will the Sterling salesmen.

B. F. Perkins & Son, Inc., Holyoke, Mass., has corrected a misleading statement made in this column. Cecil A. Potter, recently made general manager, remains as president of Machinery & Engineering Corp., Westminster, Mass., in addition to his new duties.

here's the NEW Model "E" KIDDE KNITTER



gives you 40 to 50% greater production on tulle, shoe fabrics, elastic power net, etc.

Production speeds up to 500 courses with 2 guide bars . . . up to 400 courses with 4 guide bars can be maintained 24 hours a day with the new Model E Kidde Knitter. A completely new machine, the Model E is equipped with high speed cams, totally enclosed and running in oil . . . double the usual number of guide bar rocker cams . . . pattern wheels or chain drum . . . quick stop . . . and practically non-breakable needles—all features never found in a Raschel machine before. Investigate how this machine can slash your knitting costs! Write for full information.

The word "Kidde" is the trademark of Walter Kidde & Company, Inc., and its affiliated companies.

KIDDE MANUFACTURING CO., INC. • BLOOMFIELD, NEW JERSEY

Kidde Knitter

FOR STANDARD RESULTS
be wise
DESIZE
with
EXSIZE-T

Exsize-T gives you the same safe, sure action time after time. That's why so many of the leading textile finishers use Exsize-T exclusively!

This liquid enzyme concentrate is both efficient and economical.

Write for free booklet.

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News About SUPPLIERS (Continued)

Reliance Electric & Engineering Co., Cleveland, Ohio, has made L. E. Blackwell, Jr., sales application engineer at the Charlotte, N. C. sales office.

Saco-Lowell Shops, Charlotte, N. C., has moved its Charlotte office from 1320 S. Mint St. to 717 Baldwin Circle.

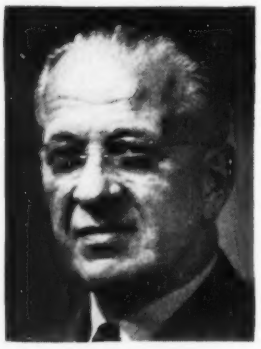
Slaughter Machinery Co., Charlotte, N. C., has made Jack P. Trexler district sales manager.

Southern States Equipment Corp., Hampton, Ga., recently dedicated a new half-million-dollar plant. The new facilities include a 25,000-sq.ft. building, a fireproof vault, a 50,000-gal. water tank, a substation for testing new equipment, an employees' cafeteria, and new machine tools.

G. H. Tennant Co., Minneapolis, Minn., has made the following changes: Charles F. Millen has been put in charge of equipment sales for Rhode Island, Massachusetts, New Hampshire and Maine; Russell Kelly has been reassigned to serve Massachusetts and Rhode Island territories; and Carlton Strong has been appointed an engineering service representative for Maine and New Hampshire.

Torrington Co., Torrington, Conn., has made five promotions: Walter C. Thompson, formerly vice president in charge of sales, has become executive vice president to succeed Alfred W. Burg, retired. Ray B. Nichols, formerly president and general manager of The Torrington Co. of Indiana, a subsidiary, has been made vice president in charge of sales, succeeding Mr. Thompson. Mr. Nichols, who will make his headquarters at Torrington, Conn., also continues as president of the Indiana company. Rodney T. Dunlap, formerly assistant general manager of the Torrington Co. of Indiana, has been named vice president and general manager of this division. Chief engineer John A. Toth has been promoted to assistant general manager, and Walter Fisher, formerly assistant chief engineer, has been made chief engineer of the Indiana plant.

Union Special Machine Co., Chicago, Ill., has appointed Stanley Singer representative in portions of Brooklyn and Queens and all of Suffolk and Nassau Counties, N. Y. L. A. Van Hooser has been appointed representative in New Orleans, La.



JOHN O. HUNT has formed a new corporation, Southern Loom Development Co., in Greenville, S. C., to design and develop textile machinery. [TW, Oct. '53, p. 98].

Vanton Pump & Equipment Corp., New York, N. Y., has changed the company name from Vanton Pump Corp. to Vanton Pump & Equipment Corp. Executive and sales offices will remain at the Empire State Building, New York 1, N. Y.

Emil V. Wilson Co., Inc., Greenville, S. C., has moved its offices to 20 Calhoun Towers. The old office was in a towel-manufacturing plant on McBee Ave. Mr. Wilson has disposed of his interest in the towel plant to devote his full time to loom rebuilding.

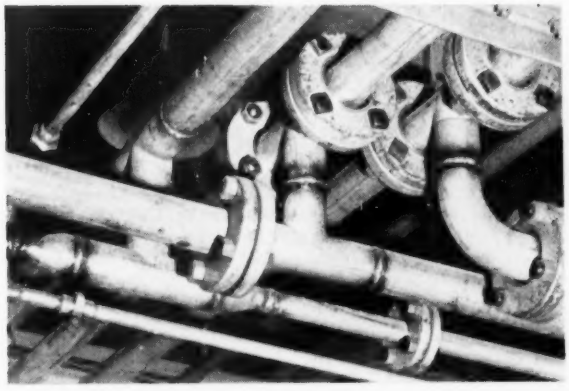
L. J. Wing Mfg. Co., Linden, N. J., has made Charles H. Smith vice president in addition to his duties as secretary and director.

Winsor and Jerauld Mfg. Co., Providence, R. I., has opened a new integral sales office under the direction of Albert J. Cole, manager, Winsor and Jerauld Southern Div., Charlotte, N. C. As a result of this operation, Winsor and Jerauld has terminated its association with Alexander F. Schenck of the Industrial Equipment Co., its former sales agency.

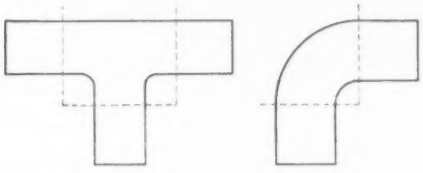
HOW TO SAVE MONEY ON STAINLESS PIPING

Speedline system

cuts cost, increases flow and capacity



Speedline Ells, Tees, Insert Flanges, and Concentric Reducer installed on 2-inch Schedule 5 Stainless Pipe in a plastics plant.



Look for the "Tangential Feature"

These drawings show a *Speedline* Tee and 90° Elbow. The dotted lines show the termination points of conventional fittings. The additional straight section of *Speedline* Fittings permits attaching of unions or flanges without fouling, reduces the number of welds required, and eliminates troublesome curved or angle joints. The tangential feature is common to all *Speedline* Fittings such as Ells, Tees, Crosses, etc.

● It will pay you to look into this new idea in corrosion-resistant piping. By using light wall stainless pipe and versatile *Speedline* Fittings, piping costs have been reduced 10% to 50% . . . and at the same time, flow and capacity of the line has been increased!

Here's the way it works:

If you are now using Stainless Pipe . . .

. . . chances are that it is the conventional Schedule 40. But this heavy wall is not needed in 90% of the cases. Light wall Schedule 5 pipe costs about half as much, and all sizes will easily withstand 150 p.s.i. working pressures. *Speedline* Fittings are specially designed for fast, low-cost installation of light wall stainless pipe lines. And because light wall pipe of the same size has a larger inside diameter than heavy pipe, you gain 15% to 25% greater flow and capacity!

If you are now using Stainless Tubing . . .

. . . the *Speedline* system offers real savings and advantages. It permits you to change to a light wall *pipe* rather than *tubing* size—at no increase in cost. And here's where you gain. Standard equipment like valves, pumps, sight gauges, etc., are made in *pipe* sizes—you hook right in without special adapters! And equally important, *piping* permits you to use the next lower dimension (for example, 1" Sch. 5 pipe has even greater capacity than 1¼" O.D. tube). This means that you can use smaller valves, flanges, and other accessories—an entire installation would be considerably lower in cost.

Speedline distributors are located in principal cities from coast to coast

Speedline Corrosion-Resistant FITTINGS

—the newest thing in pipeline economy

Manufactured by **HORACE T. POTTS CO.** • 520 E. Erie Avenue • Philadelphia 34, Penna.

The News At

HEINEMAN'S

Is About . . .

TEXTURED YARNS . . we've been licensed to produce them by E. I. du Pont de Nemours & Co.

HELANCA stretch nylon . . . it's available at Heineman's and opens many avenues for new uses. *(Heberlein Patent, licensee)*

CRIMPED NYLON . . . the finest crimped nylon. *(Scott & Williams licensee)*

and something else with special appeal now

OILED ONLY "P" TREATMENT for WELT YARNS

Look into the substantial savings you can effect through this process especially developed by Heineman, particularly for fine gauge machines where the cleaning costs are reduced sensationally.

So, as has been true for 60 years, the latest methods and most modern developments for the hosiery and knitting trades are available to you at Heineman. Let us tell you about the advantages and savings that can be yours through these processes.

Oscar Heineman

CORPORATION . . . *Division of Aetna Industrial Corporation*

DONALD G. BREWSTER, *President and General Manager*

Processors of Nylon, Orlon, Dacron, Silk, Rayon and Other Synthetic Fibers

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John G. Archer • Fourth and Grand • West Des Moines, Ia

News About **SUPPLIERS** (Continued

CHEMICAL AND YARN SUPPLIERS

MATTHEW M. GOUGER has been named vice president and director of personnel relations of General Aniline & Film Corp., New York, N. Y.

American Cyanamid Co., Calco Chemical Div., Bound Brook, N. J., has named Alden R. Loosli manager of the newly formed Market Research and Development Dept. at Calco. Mr. Loosli will also continue in his present post of assistant to the general manager. Ernest K. Hunt, manager of advertising and public relations, has also assumed direction of advertising and sales promotion for the Textile Resin Dept. Mr. Hunt will also continue as manager of the Household Products Dept. and of the Packaging Development Section. R. L. Greason has been appointed advertising and sales promotion manager of the Textile Resin Dept., reporting directly to Mr. Hunt.

American Enka Corp., New York, N. Y., has elected William Gage Brady, Jr., a director. Mr. Brady retired at the end of last year as chairman of the board of the National City Bank of New York.

American Viscose Corp., Philadelphia, Pa., has announced that Mark A. Minatelli is back at his old job as Textile Research Dept. representative for Central and South America. Mr. Minatelli resigned two years ago to manage the Textilera Mayabeque, S. A., plant at Guines, Cuba.

Charles W. Berg Laboratories, Philadelphia, Pa., has appointed Lewis E. Blackshear as Southern sales manager. His headquarters will be in Gaffney, S. C.

Carbic Color & Chemical Co. Inc., New York, N. Y., has announced that C. Walter Kuhl has relinquished the position of president but will continue as chairman of the board. Dyer S. Moss has been elected president; Carl W. Kuhl, II, executive vice president and treasurer; Thorwald Larson, vice president in charge of sales; and Edward Grayson, Southern manager.

Catalin Corp., of America, New York, N. Y., has added a wide range of anionic, cationic, and nonionic softeners and antistatic resins to its textile line. The firm has also added laboratory personnel experienced in textiles and has installed facilities for testing and evaluating treated materials.

Celanese Corp. of America, New York, N. Y., has added James D. Cummings and Stephen P. DeMallie to the Market Development Dept. of the Textile Div. Dr. R. S. Dicks has been appointed manager of the Chemical Process Engineering Section.

Ciba Co., Inc., New York, N. Y., has announced the retirement of J. P. Bauer after nearly 35 years of service with the company and its predecessors.

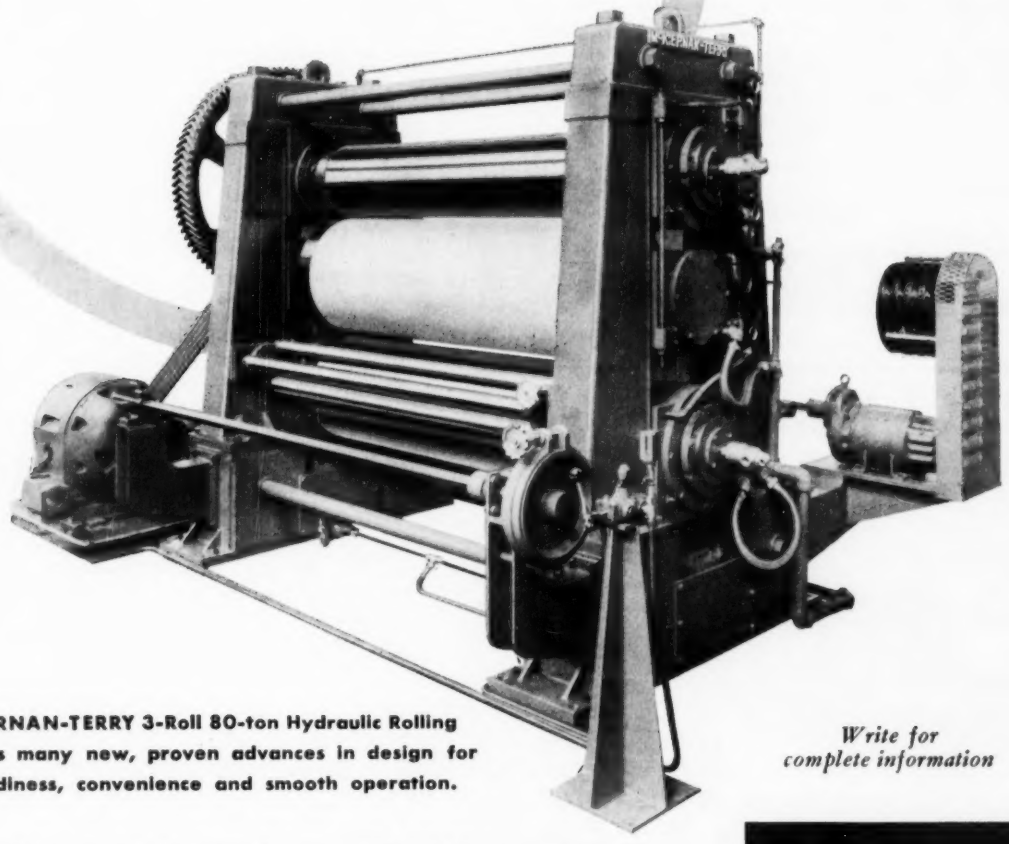
Corn Products Refining Co., New York, N. Y., has appointed R. C. Gralow director of product development. Succeeding Mr. Gralow as Chemical Div. sales manager is C. J. McDowell, formerly senior fellow of the Corn Products Fellowship, Mellon Institute.

E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., has announced the retirement of Frank B. Ridgway. He started with Du Pont as a supervisor of acid production and left as assistant general manager of the Textile Fibers Dept. in charge of production of all the company's man-made fibers.

Geigy Co., Inc., New York, N. Y., has appointed Warren R. Ross traffic manager.

General Dyestuff Corp., New York, N. Y., is consolidating its Boston, Mass., and Providence, R. I., sales offices at 85 Tockwotton St., Providence. New construction at the site will provide sales and office space and increased laboratory and

Investigate this MODERN *3-Roll Calender*



The McKIERNAN-TERRY 3-Roll 80-ton Hydraulic Rolling Calender has many new, proven advances in design for extra sturdiness, convenience and smooth operation.

Write for complete information

All main bearings are of the tapered roller type. They are mounted in Meehanite housings, and the complete assemblies are easily removed intact from the roll journals, with hydraulic pump provided for the purpose. Ample bearing lubrication is assured by circulating cooled oil, metered in the correct amount. Another advanced feature is the special oil seals, which prevent the leakage usually encountered at high temperatures.

Chilled iron top and bottom rolls are bored for gas or steam heating. Filled roll suitable for the particular application. Low pressure, fast acting, hydraulic system.

In many cases, this rigidly built, compact calender can be shipped and moved into place without disassembly and reassembly.

McKIERNAN TERRY

McKIERNAN-TERRY CORPORATION *Harrison, New Jersey* MK 603

National Travelers are designed and made to perfect your spinning. Precisely balanced, carefully hardened, and smoothly finished, these long-lived travelers are engineered for higher production of stronger yarns. Ask us to recommend the *right* travelers that will put money in the bank for your mill. National Ring Traveler Company, Pawtucket, R. I., and Charlotte, N. C.

STANDARD IN U.S.A.
American • Hicks • Wilson

WENTWORTH
Double Duty • Gravity • Gravity Express • Bal-Ellipsoid

NATIONAL ETARTNEP FINISH
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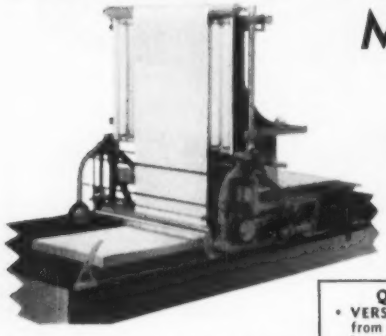
NATIONAL
RING TRAVELERS

OLDEST AND LARGEST MANUFACTURER OF RING SPINNING AND TWISTING TRAVELERS IN THE UNITED STATES

UTICA Hand Laying Up Machine for TUBULAR KNITTED FABRICS



QUICK FACTS
- **VERSATILE**—handles cloth from rolls or folds . . . any lengths.
- **QUICK INSPECTION**—holes and defects easily seen and turned out.
- **NO STRETCHING**—positive feeding eliminates all stretch.
- **ADJUSTABLE FEED** — for different weight cloth.
- **EVEN EDGES AND ENDS** —cloth goes over a spreader . . . no racking or waste.
- **RIGIDLY CONSTRUCTED** —equipped with ball bearings and frictionless bearings.

Here's a machine that lays up several times the amount that can be done by hand—and you don't need an expert to operate it. This new lightweight model piles cloth up to 7" high—standard machines 26", 32", 38" and 44" width rolls . . . others to order.

Check the features of this machine and you'll see why it's the best you can buy for laying up tubular knitted fabrics—*the machine you can't afford to be without!* Write today.

UTICA Novelty and Mill Specialty Company
2145 Dwyer Ave., Utica 2, New York
Builders of Textile Machines Since 1903

News About **SUPPLIERS** (Continued)

GORDON E. DEAN, recently chairman of the U. S. Atomic Energy Commission, has been made a director of Fruehauf Trailer Co., Detroit, Mich.

warehouse areas. Personnel from both offices will be combined under the direction of W. A. Lord, present sales manager in New England, assisted by W. M. Dewing, former manager of the Boston office. Grant A. Sharpe has been appointed sales representative in upper New York State.

The Henneux Co., 45 Columbus Ave., New York 23, N. Y., has been formed to handle the importation and sales of the products of Kalle & Co., a former I. G. Farben concern, now being operated under U. S. administration.

Imperial Chemical Industries Ltd., Dyestuffs Div., Manchester, England, has appointed G. O. Mitchell chief colorist of the division to succeed G. S. J. White, who recently became division director in charge of technical service departments.

Interchemical Corp., Textile Colors Div., Hawthorne, N. J., has appointed Clovis S. Powell Southern technical manager, with headquarters at Rock Hill, S. C. Laboratory and warehouse facilities at the Rock Hill branch have been expanded and technical representatives have been located throughout the South. Henry A. Wells has been transferred from the sales service laboratories at Hawthorne, N. J., to Rock Hill. Leo H. Crosson is located at Charlotte, N. C. E. T. McIlwain at Greenville, S. C.; and Jack H. Emerson at Griffin, Ga.

Tennessee Eastman Co., New York, N. Y., has added four new colors in Chromspun filament acetate: Light Blue 99, Gold 250, Chartreuse 251, and Rose 253. They are augmented by Turquoise 252, a lighter shade than was formerly available.

Virginia-Carolina Chemical Corp., Richmond, Va., has announced that Lyman Billings has joined the Fiber Div. In his new position he will give technical sales services and will specialize in fabric finishing.

Woonsocket Color & Chemical Co., Woonsocket, R. I., has employed Harry M. Martin, formerly representative of Enterprise Dye Works. He will represent Woonsocket as southern New England representative, covering Connecticut, part of Rhode Island, and part of Massachusetts.

OTHER SERVICES

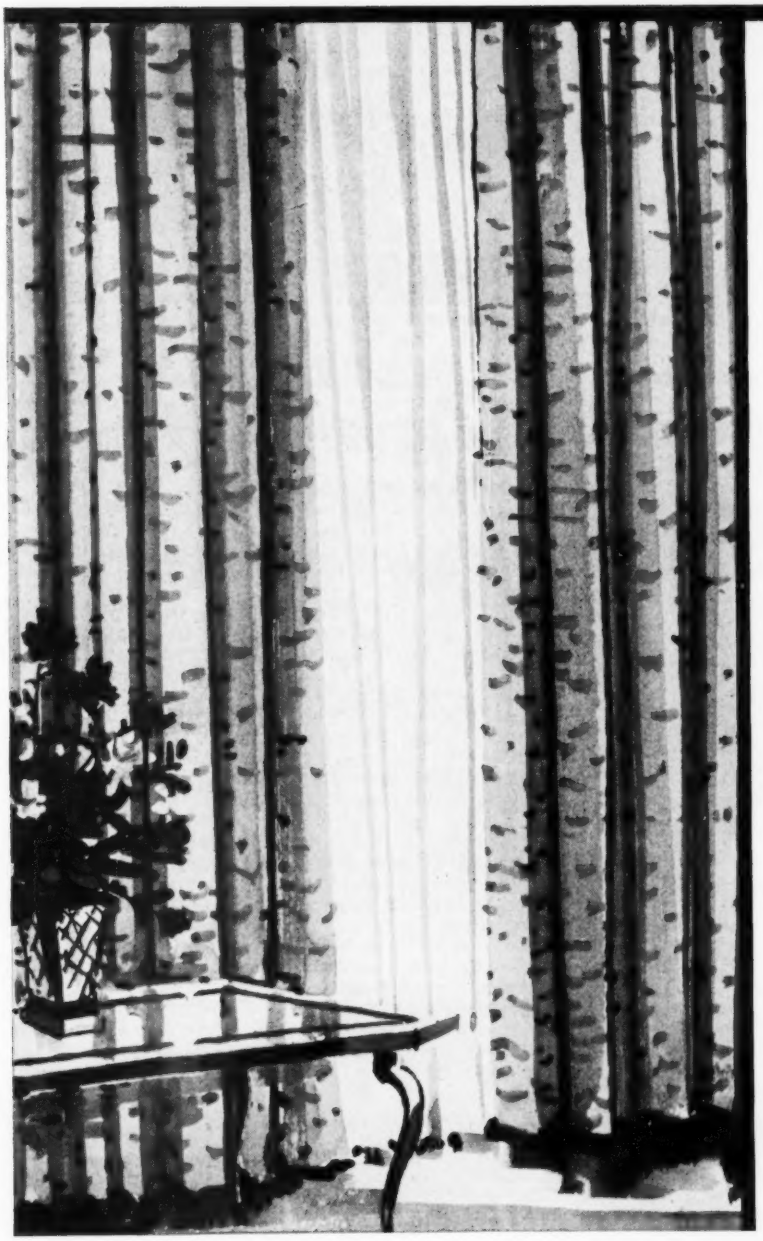
LTI, Lowell, Mass., has made the following faculty changes: Richard W. Ivers has been promoted to the position of dean of students; Arthur F. Haley, Jr. has been named assistant director of admissions; Dr. Wentworth Williams, formerly dean of students, will assist with new duties in the Division of General Studies; Harry C. Brown, formerly associate professor in the engineering division, has been promoted to professor, and Adolph Katz, formerly assistant professor in the engineering division, has resigned to accept the position of assistant to the director of research for the Research Foundation.

National Cotton Council, Memphis, Tenn., has moved Robert E. Price, the Mississippi Delta field representative, to the sales promotion staff in the Memphis office. Mr. Price is being replaced in the Delta territory by Walter H. Raynor, who has been serving as representative for east Mississippi. Ernest H. Tucker, the Council's Georgia field man, has been transferred to Starkville, Miss., to assume Mr. Raynor's former duties in that territory. James O. Jackson has replaced Mr. Tucker in the Georgia territory.

NOW... draperies and curtains that will keep their length

year after year, thanks to Celanese* FORTISAN*

the super-strong rayon fiber



Celanese Fortisan's high tensile strength and exceptional dimensional stability answer a costly problem for the drapery industry: Quality controlled fabrics with a Fortisan warp will remain virtually unchanged in length regardless of hanging time or atmospheric conditions.

Fortisan is a pure white without bleaching and may be subjected to all cotton finishing techniques. It is not thermoplastic and may be pressed with a hot iron. A wide variety of filling yarns may be used with Fortisan for an almost unlimited range of fabric effects.

Fortisan yarns are available for immediate delivery in deniers from 30 to 300. Textile manufacturers are invited to consult with Celanese technical representatives to determine best uses of Fortisan for their purposes.

Celanese Corporation of America, New York 16, N. Y. *Reg. U. S. Pat. Off.

People work better when they

SEE BETTER

MAGNI-FOCUSER
helps Menders
Fixers, Mechanics
Knitters, Inspectors

Leaves both hands free to work

In the Durham Hosiery Mills

Observing operation for narrowing defects—one of the many jobs that can be done better and faster with a Magni-Focuser.

IN leading textile plants, Magni-Focuser — the binocular magnifier — reduces eye strain and prevents squinting—thereby speeding production, increasing accuracy and minimizing the chance of errors and accidents. Especially valuable in working on 60 gauge, 15 denier yarn. Restores the usefulness of the skilled hands of many older workers whose vision needs a seeing aid.

Prismatic lenses assure optical accuracy. Normal vision resumed by slightly lifting head. Used with or without eyeglasses. Order now for 10-day trial. Return if not satisfied. $10.50. Send for folder.

Gives true third-dimensional ("3-D") vision

Edroy Products Co., Dept. W, 480 Lexington Ave., New York 17

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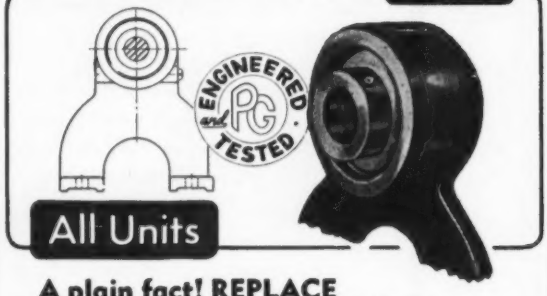

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NEWS ABOUT Mills

COTTON MILLS

American & Efird Mills, Inc., Mount Holly, N. C., plans to begin partial operations in its new 70,000-sq.-ft. addition soon. The Lawrenceburg, Ky., plant will be moved into the new space. Full production in this unit is expected by the end of the year.

Beaumont Mills, Spartanburg, S. C., has installed 120 new Draper looms. Beaumont is nearing completion of a plant-wide modernization program.

Callaway Mills Co., LaGrange, Ga., expects to begin operations shortly in the new addition to its Hillside plant. This new addition provides an additional 6,250 sq. ft. of floor space in which 60 individual-motor-driven cards will be installed. The cost was $300,000. Callaway has also installed two Barber-Colman automatic spoolers in the twisting and winding department of its dyeing plant.

Clinton Cotton Mills, Clinton, S. C., is installing machinery in its recently completed 120,000-sq.-ft. addition. About 100 looms have been installed and are now in production. An additional 400 new looms and 20,000 spindles are to be added. All of this machinery is scheduled to be in operation around the end of the year. Production will be increased by about 25%.

Fieldcrest Mills, the textile-manufacturing division of Marshall Field & Co., Inc., has been purchased by John P. Maguire and E. Stanley Klein, president and vice president respectively of John P. Maguire & Co. A new corporation, to be known as Fieldcrest Mills, Inc., will be formed. Milton C. Mumford will be president, Harold W. Whitcomb will be vice president in charge of mill operations, and James C. Walsh will be secretary and treasurer.

Fulton Bag & Cotton Mills, Atlanta, Ga., has purchased the Savannah, Ga., plant of Mente & Co., and plans to take over operations.

Groves Thread Co., Gastonia, N. C., has begun construction of its new mill that will manufacture specialty yarns and thread. The new mill will contain about 30,000 sq. ft. of floor space. John Kaylor, Gastonia, is the contractor. Completion is expected in six months. Groves recently installed new equipment in Plants No. 1 and No. 2 and in its finishing plant.

Harriet Cotton Mills and **Henderson Cotton Mills,** Henderson, N. C., have completed a $3,000,000 expansion and modernization program. New buildings were constructed and new machinery and equipment have been installed.

Horvath Bros., New York, N. Y.—Interests associated with this firm have acquired West Textile Mills, Inc., West, Texas, and Profile Cotton Mills, Jacksonville, Ala.

Katherine Chenilles, Dalton, Ga., is constructing a one-story mill. The new mill will be used to increase production.

Morgan Cotton Mills, Laurel Hill, N. C., is installing 500 40-in. Draper looms for the production of print cloth.

Springs Cotton Mills, Lancaster, S. C., is constructing a new addition to its Grace Bleachery and Finishing Plant, Grace, S. C. The new building, containing 104,000 sq. ft., will house new bleachery ranges and dyeing machines. It is estimated that the building and machinery will cost over $2,000,000. Completion is expected in about eight months.

United Cotton Mills Ltd., St. John's, Newfoundland, is adding a spinning, weaving, and knitting plant to its present operations. The addition will measure 150x200 ft. Fritz W. Stobbe is manager of the mill. The assistant manager is L. H. Camtwell. United Cotton produces pillow slips, handkerchiefs, and sport shirts.

AT THE 1954 AMERICAN TEXTILE MACHINERY EXHIBITION

The picture above shows the Barber-Colman exhibit at the 1950 Exhibition. At the 1954 Exhibition, Barber-Colman will show several machines now reaching final stages of development — NEW equipment for important yarn-processing operations. Some of these machines will be briefly described in subsequent advertisements. PLAN NOW to attend . . .

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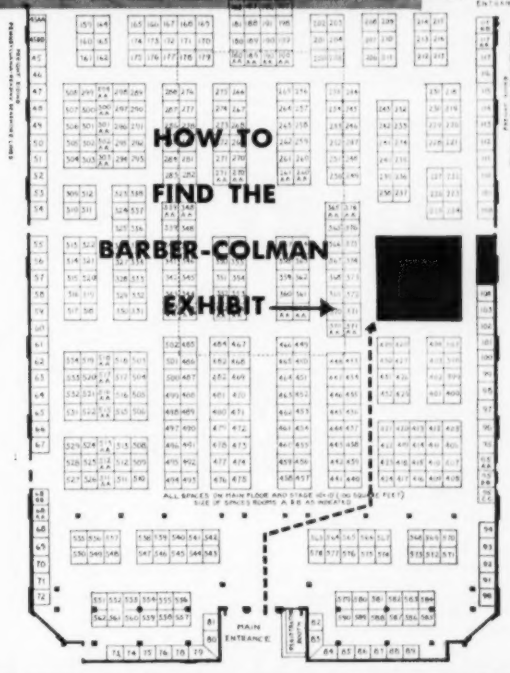

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Mr. Fakula has had broad experience in a variety of industries in both consulting and operating capacities. Recently he completed an outstanding project for a well-known textile company which brought about close coordination of production and sales. He has been able to apply to textiles many of the principles which have proved so successful in the automotive and aircraft industries.

We will be pleased to give further information about the services rendered by our new Peter M. Fakula Division, as well as by our other departments.

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News About MILLS (Continued)

United Merchants & Manufacturers, Inc., New York, N. Y., has acquired the A. D. Juilliard & Co. properties through an exchange of stock. Juilliard's Southern mills at Aragon, Ga., and Brookford, N. C., will be expanded for increased production.

Victor Balata & Textile Belting Co., Easton, Pa., has awarded the contract for the construction of a one-story-and-basement brick plant at Easton to A. Raymond Roff Co., 1635 W. Thompson St., Philadelphia, Pa. The cost is estimated at $90,000.

West Point Mfg. Co., Shawmut, Ala., has let the general contract to Batson-Cook Co., West Point, Ga., for a new community center and swimming pool. Charles M. Graves, Atlanta, Ga., is the architect.

Woodside Mills, Simpsonville, S. C., is constructing an addition to its boiler room that will provide space for the installation of two new boilers. Daniel Construction Co., Greenville, S. C., is the contractor.

WOOLEN AND WORSTED MILLS

Albany Felt Co., Albany, N. Y., has broken ground for a four-story brick addition to its main office building.

Albany Felt Co. of Canada Ltd., Cowansville, Que., is installing a 600-in. Crompton & Knowles felt loom and a Riggs & Lombard double-side rotary fulling mill powered by two 40-hp. motors.

Belmont Woolen Yarn Mills, Woonsocket, R. I., has been purchased by Alfred W. Cavedon, who is secretary-treasurer and manager of Aldon Spinning Mills Corp., Talcottville, Conn. The plant will continue under its present operating management.

Sidney Blumenthal & Co., Inc., Wilson, N. C., is adding 45,000 sq. ft. to its plant to accommodate machinery that was purchased recently from Shepperd Mills, Inc., Manayunk, Pa.

James Lees & Sons, Bridgeport, Pa., has let the general contract to Lloyd F. Kershner, Norristown, Pa., for the construction of a new shipping building. The one-story building will be of masonry construction. Robert McFarland, Lees' purchasing agent, and Robert O. Oberholtzer, Lees' chief engineer, are supervising the project.

National Felt Co., Easthampton, Mass., is constructing a two-story, 52x52-ft. mill building. The cost is $20,000. Aquadro & Cerruti, Northampton, Mass., is the contractor.

Paris Wincey Mills Co., Paris, Ont., has a modernization program under way at its plant. New machinery will be installed.

Pendleton Woolen Mills, Pendleton, Ore., and **Washougal Woolen Mills**, Washougal, Wash., are to be merged under the name of Pendleton Woolen Mills, with a capitalization of $3,500,000.

George Sheard & Co. Ltd., Coaticook, Que., has let the contract to build an extension to its mill to B. G. L. Engineers & Builders Ltd., Montreal. Rudolphe Lajoie, Coaticook, is the architect. The estimated cost is $60,000.

Alexander Smith, Inc., Yonkers, N. Y., plans to construct a new one-story mill branch and warehouse at Columbus, Ohio.

ABBOT WORSTED CO. has completed this new $2,000,000 worsted mill at Seneca, S. C. The one-story building contains 92,000 sq. ft. and is completely air conditioned. The plant will employ 300 people. Daniel Construction Co., Greenville, S. C., was the contractor.

Keep your **BOBBINS** *in* **TOP CONDITION** *at* **LOWER COST** *with the*

No. 88 NASH *Automatic*
BOBBIN REFINISHER

• This time-tested machine was born of a need . . . designed to keep bobbins in perfect condition with a highly polished surface, and assure a *better run-off of yarn.* The Nash 88 has won highest praise from users everywhere. It assures uniform, smooth-surface reconditioning with a saving of labor cost.

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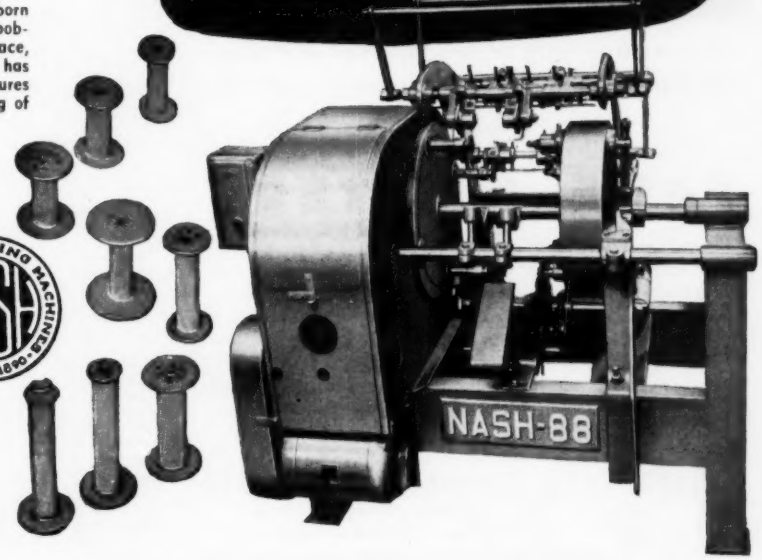

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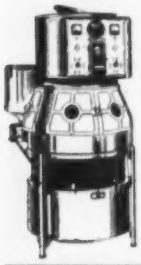

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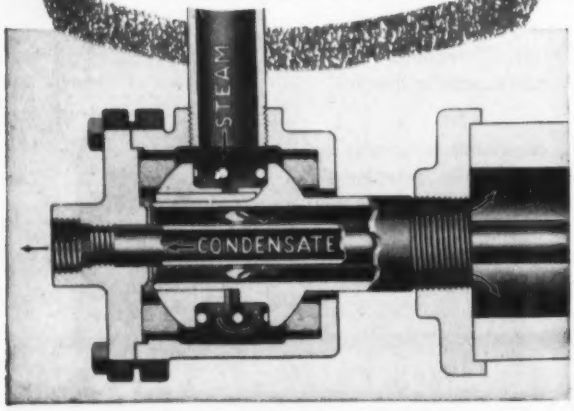


News About **MILLS** (Continued)

SYNTHETICS MILLS

Duplan Corp., Hazleton, Pa., has moved its general offices to 1320 S. Mint St., Charlotte, N. C. The Pennsylvania plants at Kingston, Hazleton, and Berwick will continue under their present operation; and the main office will continue in New York.

Hess, Goldsmith & Co., Atwater Div., Wilkes-Barre, Pa., has purchased a building formerly occupied by Wilkes-Barre Lace Mfg. Co. The building will be for storage.

Lehigh Spinning Co., Allentown, Pa., has installed six new twisting machines.

KNITTING MILLS

Amos Hosiery Mill, High Point, N. C., has received bids for the construction of a 9,500-sq. ft. addition to its plant that will be used for an expansion of the company's operations. The addition will be three stories, with brick walls supported by steel framework. The cost will be $100,000.

Avalon Hosiery Ltd., Montreal, Que., is proceeding with the construction of a second-story addition. Additional machinery will be installed. Ben Milner, president and managing director, is also president of Elizabeth Ltd., Frankfort, Germany, which manufactures Perlon and nylon hosiery.

Burlington Mills Hosiery Co. of Canada Ltd., Lachine, Que., has completed an 8,200-sq.-ft. addition to its knitting department. The new addition, built and equipped at a cost of $500,000, will begin full production when all the new Reading "100" machines are installed. The company has purchased 10 additional Reading "100" 30-section high-speed, fully automatic machines with Reliance electronically controlled drives.

William Carter Co., Sanatobia, Miss. — The Board of Aldermen closed bids Aug. 26 for a new one-story building, 200x250 ft., that will be occupied by Carter under a long-term lease. The construction award will be made soon. The cost is reported at about $325,000, exclusive of equipment.

Flamingo Knitwear, Inc., recently began operations at 799 Towne Ave., Los Angeles, Calif. The new plant contains 34,000 sq. ft. of floor space. The equipment includes three 10½-cut Ordnance Gauge machines. Women's sweaters are being manufactured.

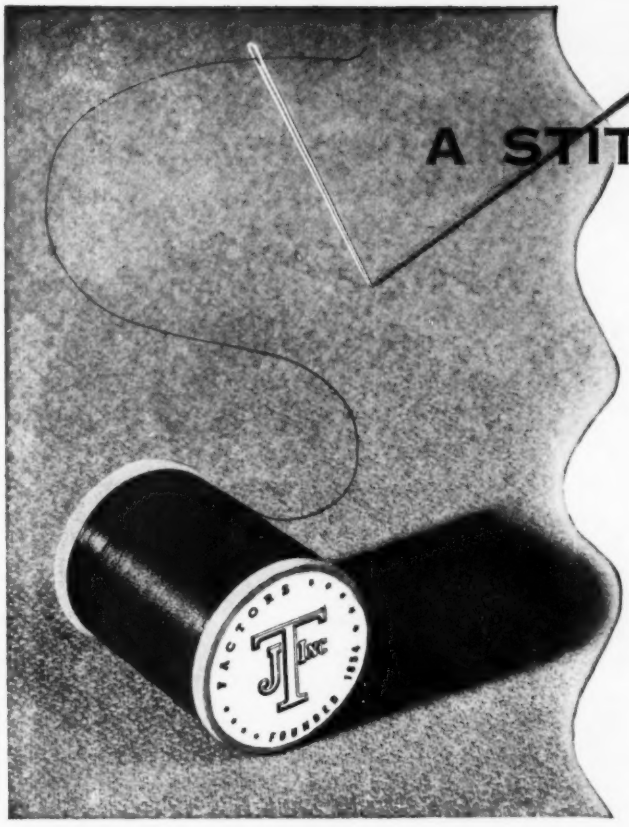
Girard Knitting Mills, Philadelphia, Pa., is regauging a large number of circular transfer knitting machines to a finer gauge in order to produce a finer cut garment for men and women.

Grenada Industries, Inc., Grenada, Miss., has let the contract to Moss Brothers, Grenada, for a new one-story addition to its mill. The new addition will contain about 11,000 sq. ft. of floor space. Pritchard & Nickles, Tunica, Miss., is the architect.

Jantzen Knitting Mills, Inc., Portland, Ore., has let the contract to Craig & Randall, Inc., Los Angeles, Calif., for a new one-story mill, 180x180 ft., at North Hollywood, Calif. The cost is estimated at $120,000.

Kayser Hosiery Mill, Belton, S. C., will double its production with the installation of 16 additional machines. The new machines, valued at $560,000, will bring the total number of knitting machines to 34. This machinery, transferred from another plant of Julius Kayser & Co., is capable of producing 1,428 doz. pairs of 51-gauge nylon hose per day.

Kennebec Knitting Mills Ltd., Pintendre, Que., has completed its new carding and spinning plant at St. Romuald, Que. The one-story plant contains 11,250 sq. ft. of space. New equipment installed includes two 60-in. cards complete with tape condensers and four Whitin Model E ring spinning frames. The cost was $200,000. The new plant will be known as the Atlantic Div. of Kennebec Knitting Mills Ltd.



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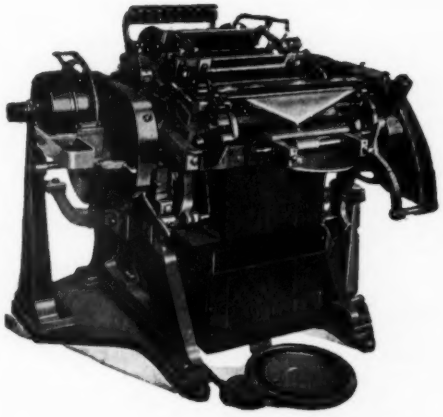

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Southern representative — Dyer S. Moss Co., Charlotte, North Carolina

News About **MILLS** (Continued)

Lebanon Knitting Co., Pawtucket, R. I., is erecting a two-story addition to its mill. Henry M. Soule Co., Pawtucket, is the contractor.

Minisac Knitting Mills, Philadelphia, Pa., has installed new knitting machines and auxiliary equipment.

Nebel Knitting Co., Charlotte, N. C., has installed a complete RCA sound system throughout its plant. The system permits radio reception or record playing.

Roanoke Mills, Inc., Roanoke, Va., has opened a branch plant at Lakeside, Va., where many finishing operations formerly conducted at Roanoke will be handled. About 100 of the firm's 800 employees have been transferred to the Lakeside plant. New equipment will be added at the Roanoke mill in the vacated space.

Tennessee Knitting Mills, Columbia, Tenn., has purchased multisection full-fashioned machines for the production of 66-gauge nylon hosiery.

Triangle Hosiery Co., High Point, N. C., has transferred all its knitting and looping equipment to the renovated building that formerly housed Guilford Hosiery Mills, Inc. The present Triangle building is being converted to handle the dyeing, boarding, finishing, and shipping facilities.

Unit Hosiery Co., Cleveland, Ohio, has doubled its floor and stock space by acquiring an adjoining building and installing new racks, a motor-driven conveyor system, and other improvements.

White Pine Hosiery Mill, Jefferson City, Tenn., has begun the production of anklets. A. P. Steed is manager of the new plant.

DYEING AND FINISHING PLANTS

Avondale Mills is installing a series of Smith, Drum & Co. multiple-kier beam-dyeing machines at its Alexander City, Ala., plant.

Central Yarn & Dyeing Co., Gastonia, N. C., has added eight winders for dye-tube preparation. This equipment is designed specially for handling spun-synthetic yarns.

Crown Dye Co., Dalton, Ga., has constructed a new brick addition that will house a new rubberizing unit to apply backing on rugs.

Demi-Modes, Inc., Albany, N. Y., has changed its name to National Piece Dye Works, Inc. This company is an affiliate of Eastern Piece Dye Works, Inc., Albany, N. Y.

Imperial Cloth Co., Listowel, Ont., plans to construct an addition to its plant for the installation of complete dyeing and finishing operations. The estimated cost of construction is given at $19,000, with the cost of equipment estimated at $40,000. Noell Porritt is the manager.

Lincoln Processing Co., Ellsworth, Me., has begun the construction of a million-dollar plant. The firm is an associate organization of Argonne Worsted Mills, Woonsocket, R. I.

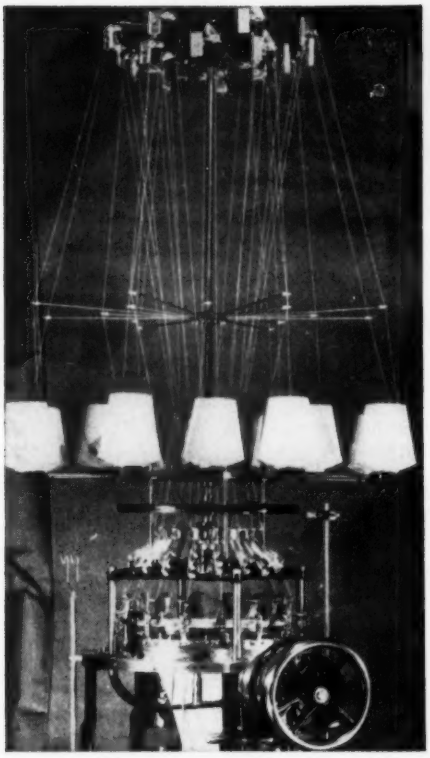
Normandy Print Works, New Bedford, Mass., is adding a dyeing and finishing department for the processing of linings. Six new Werner constant-speed jigs are being added to the eight already in place, plus a new Van Vlaanderen stainless-steel dryer and a Werner padder. Approximately 75 new employees will be added when the department starts full production.

Ohio Falls Dye & Finishing Co., Louisville, Ky., has changed its name to Ohio Falls, Inc.

Roanoke Mills, Inc., Roanoke, Va., is constructing a 72x100-ft. addition to its plant. The dyeing and drying operations will be located in the new addition. The estimated cost is $125,000.

Sever Silk Dyeing & Finishing Co., Haledon, N. J., has been purchased by Samuel Fire, president of Nina Dye Works Co., Inc., York, Pa.

A. M. Townson & Co., Inc., Philadelphia, Pa., has been purchased by J. M. Schneider, secretary-treasurer of the company.



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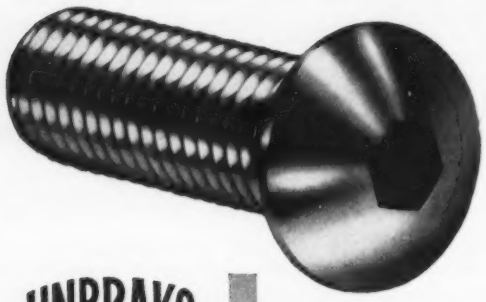

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UNIVERSAL WEAR TESTER

THE CSI-Stoll Quartermaster Universal Wear Tester is a multi-purpose instrument for measuring resistance to laboratory wear of such materials as woven and knitted fabrics, napped and pile fabrics, hosiery, felt, non-woven and coated fabrics, yarn, threads and plastic films, rubber sheeting, leather, paper and many other materials. It is a self-contained precision instrument which gives direct evaluation of quantative parameters for resistance to surface abrasion; edge, fold and projection abrasion; roll and fold testing and flex abrasion. All these tests may be made with a specimen dry or immersed in water, oil or other liquids. Automatic end points are provided for all test procedures.

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541-543 Devon Street Arlington, New Jersey
MANUFACTURERS OF CUSTOM BUILT LABORATORY EQUIPMENT

NEWS ABOUT *Men*

T. Adams has been elected a director of Chatelaine Hosiery Ltd., St. John's, Que. He is assistant to **M. G. Boisclair** the company's general manager.

C. Chester Bassett has resigned as divisional manager of the industrial and diversified-fabrics division of Burlington Mills Corp., New York, N. Y.

John P. Baum has been appointed executive officer of M. T. Stevens & Sons Co. Div. of J P. Stevens & Co., Inc., New York, N. Y. **Abbot Stevens** has retired as vice president but will continue to serve as a director. Mr. Baum will remain in charge of Stevens's woolen and worsted manufacturing in the South.

Henry Benjamin, formerly plant superintendent for Duro Finishing Co., Fall River, Mass., has been named dyeing superintendent at Normandy Print Works, New Bedford, Mass.

E. S. Bennett has been named head of the Central Rechecking Dept. of United Merchants and Manufacturers, Inc., Union, S. C. This department is being moved from New York to Union.

F. Berry has resigned as overseer of carding at Best Value Mfg. Co., Bridgeton, Me. He has been succeeded by **J. Alton Powers. H. Brown**, has resigned as overseer of spinning and has been succeeded by **Frank Hart.**

W. F. Bird has been elected president of Collins & Aikman Corp., New York, N. Y., succeeding **Albert R. Jube.** Mr. Jube has been elected chairman of the board.

James H. Blore, assistant editor of TEXTILE WORLD, has been elected to an Associate of the Textile Institute.

Roswell Brayton has resigned as superintendent of yarn preparation and research at Warwick Mills, Inc., Boston, Mass., to accept the position of director of research for Woolrich Woolen Mills, Woolrich, Pa.

HENRY H. COSGROVE, JR., has been named manager of United Rayon Knitting Mills, Old Fort, N. C. Mr. Cosgrove succeeds T. J. Martin, resigned.

D. A. Briggs has been elected chairman of the board of Paris-Wincey Mills Co., Paris, Ont. **Jackson C. Baird** has succeeded Mr. Briggs as president.

Hillard Brigman, has succeeded **Hubert Thomson**, resigned, as superintendent of weaving at the No. 2 Mill of Borden Mills, Kingsport, Tenn.

J. Craig Cameron has been named night superintendent at Lebanon Woolen Mills Corp., Lebanon, N. H.

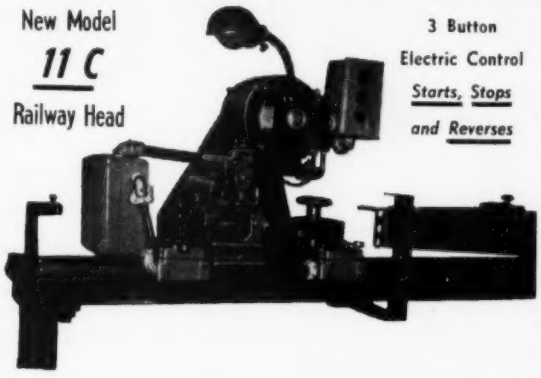
Richard C. Canavan, manager of the control department, and **Donald F. Murphy**, manager of the design department of Sidney Blumenthal & Co., Inc., have been transferred from the Shelton, Conn., plant to the Rocky Mount, N. C., plant.

Thomas Cherbas has been appointed mechanical maintenance superintendent at James Lees & Sons Co., Bridgeport, Pa. Mr. Cherbas succeeds **George Burpee**, who has been named tufting superintendent.

James R. Clark, assistant superintendent of the Fountain Inn plant of Woodside Mills, Greenville, S. C., has been named superintendent of the

New Model
11 C
Railway Head

3 Button
Electric Control
Starts, Stops
and Reverses



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Push button control travels with the motor. Motor controlled through magnetic switches.

All bars, levers and parts for mechanical control eliminated. Reduced maintenance cost.

Operator has instant control of sewing. Sewing stops at end of seam automatically.

Reverse button returns head to starting position while operator prepares fabric ends for next sewing. Head stops at starting position automatically.

Sewing unit remains idle while Head travels in reverse. Clutch operates in reverse by power or by hand. Model 11B without power reverse has two button control.

New safety guard over cloth pins. New electric cable folds away without dragging.

Can be equipped with Dinsmore single Chain Stitch Sewing Heads.

Send samples for trial. Any fabric. Any width.

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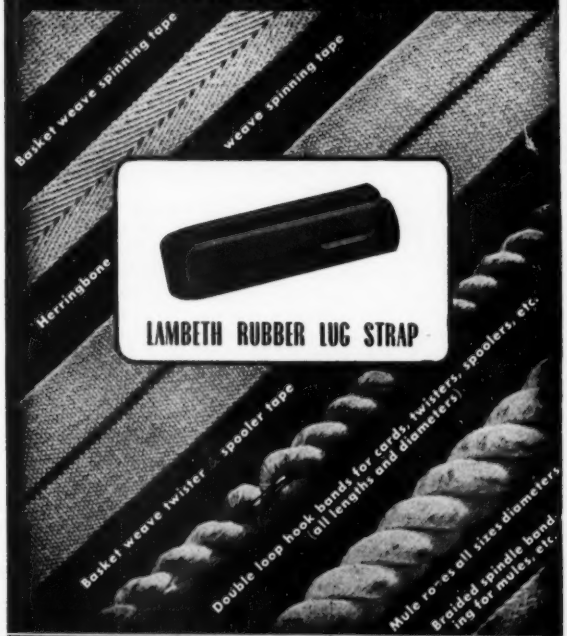
FOR SPINNING, TWISTING, SPOOLING, WEAVING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weave spinning tape
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LAMBETH RUBBER LUG STRAP
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Double loop hook bands for cards, twisters, spoolers, etc. (all lengths and diameters)
Mule re-es all sizes diameters
Braided spindle band ing for mules, etc.

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Plants at New Bedford, Mass. and Kings Mountain, N. C.

***Stainless Steel* CYLINDERS**
...accurate...true running

Blickman Built Stainless Steel drying cylinder . . . 60 inch diameter. Plate No. 7252

Stainless Steel drying rolls . . . high pressure steam, built to A S M E code specifications.

FOR TROUBLE-FREE SERVICE UNDER MODERN HIGH SPEED TEXTILE OPERATIONS

For protecting the fabrics you process, Blickman Built cylinders are being recommended and used by an increasing number of manufacturers of textile finishing machinery. The reason is simple. Blickman specializes in the fabrication of stainless steel cylinders to give you a more accurate, more dependable, safer cylinder. Our special plant equipment and controlled welding procedures assure rugged construction for long service. Blickman Built cylinders are available through many textile machine builders or through us.

- **DIMENSIONS**—Built in any diameters or lengths to meet your requirements.
- **FINISH**—Polished on our own automatic machines to as high as number 6 finish, if you require it.
- **CODE REQUIREMENTS**—Cylinders built to conform to local and ASME national board codes.
- **INSPECTION**—Tested at twice working pressure . . . thoroughly checked for leaks.
- **CONSTRUCTION**—Mechanically sized for accuracy and true running. Furnished with or without heads.
- **TYPES**—Dry cans, presetting cylinders, cooling cylinders, etc.

Specify Blickman Built cylinders through your textile machine builder . . . or send your inquiry direct to us. Quotations furnished promptly.

You are welcome to our exhibit at the Chemical Exposition, Commercial Museum and Convention Hall, Philadelphia, Pa., Booth 407, November 30-December 5.

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Manufacturers of stainless steel textile equipment, dye boxes, linings, cylinders, dry cans, rolls, hoods, tanks.

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"MAGIC WAND" PAT.
SELF-ENERGIZING, INDUCTION TYPE
STATIC NEUTRALIZER BARS
...INEXPENSIVE · SAFE
TO...
ELIMINATE STATIC
IN PROCESSING WOVEN MATERIALS

AMAZING NEW DISCOVERY
THE "MAGIC WAND" USES STATIC ELECTRICITY GENERATED ON YOUR MACHINE AS THE NEUTRALIZING AGENT

No expensive high voltage cables or transformers needed . . . No health hazards . . . Simple, easily installed, requiring no maintenance . . . No spark hazards, SAFE, does not shock operators nor damage stock.

The higher the charge, the faster the processing speed, the better this neutralizer works. Assures complete, not partial neutralization of static charges to safe levels.

• WRITE FOR BULLETIN NO. 125 •

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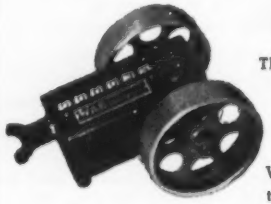
"YOU CAN COUNT ON WAK COUNTERS"



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We build single, double and triple pick counters; yardage, rotary, ratchet and special counters.

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News About MEN

(Continued)

CARROLL B. LITTLE has been appointed manager of the Worsted Dept. of American Thread Co., Willimantic, Conn.

Easley, S. C., plant. **Arthur M. Erwin**, head of the dye plant at Liberty, S. C., succeeds Mr. Clark at Fountain Inn.

L. M. Clemmer, president of Granite Hosiery Co., Souderton, Pa., has assumed the additional titles of general manager and secretary-treasurer. He succeeds **A. H. Underkoffler**, who has resigned and sold his stock to the corporation.

John W. Connell has been named production manager at the Nashua, N. H., finishing plant of Indian Head Mills.

Wade Costello, former finisher at Kennebec Mills, Fairfield, Me., is now with Kenwood Mills, Cavendish, Vt.

Carl E. Ellis has been promoted to night superintendent of Greenwood Mills, Greenwood, S. C. He succeeds **Fred T. Hurt**, who has been named superintendent of the Durst plant. **W. Clayton Thompson**, assistant superintendent of weaving, slashing, and the cloth room of the Mathews plant, has been promoted to assistant superintendent of the entire plant.

W. M. Emery has resigned as overseer of weaving at the Mascoma Mills of American Woolen Co., Lebanon, N. H. He has been succeeded by **Robert A. Klenner.**

Richard M. Everett has retired as manager of the Industrial Fabrics Dept. of the Cotton & Rayon Div. of Pacific Mills, Boston, Mass. He has been retained as independent consultant on product development.

O. N. Fisher has been named head of the methods and standards department of Bibb Mfg. Co., Macon, Ga. **N. J. Piper** has succeeded Mr. Fisher as assistant superintendent of the No. 2 mill group. **Harold Gates** succeeds Mr. Piper as superintendent of the Taylor Mill.

R. E. Fritz has resigned as overseer of dyeing at Fred Whitaker Co., Philadelphia, Pa.

Charles Giles has succeeded **Weddie W. Huffman** as personnel director of the Burlington Mills plant at Newton, N. C. Mr. Huffman has been transferred to the Cramerton, N. C., plant.

Elden A. Hopkins has been appointed cotton-yarn superintendent at Amoskeag-Lawrence Mills, Inc., Manchester, N. H.

William R. Jenkins has been appointed manager of the new plant of Ames Textile Corp., Cleveland, Ga.

Charles Johnson has resigned as overseer of dyeing at Fulton Mills of American Woolen Co. to accept a similar position at the company's Raleigh Mills, Raleigh, N. C.

Rollins Jolly has resigned his position at American Thread Co., New York, N. Y., to accept a position with Kingston Mills, Inc., Cartersville, Ga.

Leonard Kuvin has resigned as manager of the market-research department of American Woolen Co., New York, N. Y. He will open offices as a management consultant in New York.

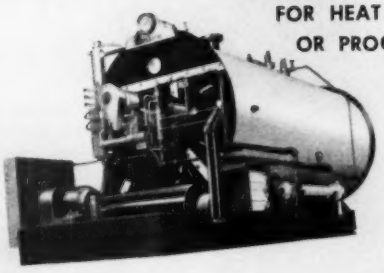
Martin Lazzareschi has joined the wet-finishing department of the Puritan Mill of American Woolen Co., Plymouth, Mass.

Edmund A. Leonard has been named manager of process development and technical service for Alexander Smith, Inc., Yonkers, N. Y. **Emory P. Mesereau, Jr.**, has been named manager of product research and development.

Carlyle Lewis, group manager of five Burlington Mills plants, has been transferred

STEAM

FOR HEAT
OR PROCESS



A complete steam plant backed by undivided responsibility • Shipped completely assembled • More than 80% thermal efficiency guaranteed • 4-pass design provides 5 sq. ft. of heating surface per b.h.p. • Built-in induced draft eliminates need of expensive chimney • Simple installation • Clean, quiet operation • Heavy-duty construction assures long-lived dependability

Superior Steam Generators are manufactured in 18 sizes from 20 to 600 b.h.p. for pressures up to 250 p.s.i. or for hot water heating.

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With Oxy Neutralizer "Cold" Bar!

● Completely eliminates annoying, costly static on any machine. ABSOLUTELY SAFE — no arcs, shocks or sparks. Thousands in use. "Cold" Bar easily installed. Operates electrically. No maintenance needed. Completely guaranteed. Send us details of any machine which is giving you static trouble. We'll submit recommendations without obligation.

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Laboratory tests prove Damp-Tex System is best answer to 23 special painting problems offered by any enamel brand. Field tests (the best test of all) on Damp-Tex are most conclusive of any wet surface enamel. Quality and performance proved over 10-year period in more than 10,000 plants. Whether you need the new non-yellowing extreme whiteness or exceptional hardness and mildew resistance to acids and alkali, or fast 30-minute drying, or a non-toxic surface, no flavor tainting odor . . . just tell us *your* problem. The Damp-Tex System may have the exact formula to solve it.

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LIQUID, PORCELAIN-LIKE **DAMP-TEX** FOR

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Please send representative to survey our plant and recommend the most advanced solutions without obligation.

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Dye-resistant and boil-proof, permanent, inexpensive, quick and easy to use.

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Philadelphia 44, Pa.

News About **MEN** (Continued)

JOHN R. MANSFIELD has been appointed manager of the newly formed Children's Div. of The William Carter Co., Needham Heights, Mass.

from Lexington, N. C., to High Point, N. C., where he will continue to manage the company's five plants in Lexington, High Point, and Greensboro.

F. D. Lockman has retired as superintendent of the Buffalo plant of Union-Buffalo Mills, Buffalo, S. C.

John Lodge, II, will be superintendent of American Woolen Co.'s Tifton, Ga., plant when it is opened.

E. W. Lollis has been named superintendent of Plant No. 1 of Limestone Mfg. Co., Gaffney, S. C. **Paul Gaffney** has been made superintendent of Plant No. 2.

Julian M. Longley has been elected president of the board of Villa Rica Mills, Villa Rica, Ga., succeeding **W. B. Chandler**, who has retired. **Hayne Waldrop** has been named a director to succeed **F. J. Daniell**, retired.

A. Foster McKissick has been elected president of Alice Mfg. Co., Easley, S. C. **Ellison S. McKissick, Jr.,** is the newly elected treasurer. The two brothers succeed their father, **Ellison S. McKissick**, who has been elected chairman of the board.

R. F. Miller has retired as superintendent of Ragan Spinning Co., Gastonia, N. C. **Roy E. Johnson** has succeeded Mr. Miller.

John L. Mortimer has been named superintendent of Massachusetts Mohair Plush Co., Lowell, Mass., succeeding **Kendall T. Greenwood.**

H. W. Ormand has been elected a director of Thomaston Mills, Thomaston, Ga.

Carl U. Peterson has been appointed assistant to **Raymond G. Franks**, president of Robison Rayon Co., Pawtucket, R. I.

Arthur Phillips has been named division manager of the Williamston, Honea Path, and Belton, S. C., filament-weaving plants of Textron, Inc.

James Powers has resigned as overseer of finishing at Lincoln Mills Co., Pascoag, R. I.

William F. Robertson has been named general manager, vice president, and a director of Riegel Textile Corp., Ware Shoals, S. C. **James A. Byars** succeeds Mr. Robertson as assistant general manager.

Wilfred Rochon has been appointed dyer for Collins & Aikman Corp., Bristol, R. I.

Herman Sayles has been named vice president in charge of manufacturing at Botany Mills, Inc., Passaic, N. J. He succeeds **Harry C. Templeton**, who is retiring as executive vice president and general manager.

Ralph G. Scheufler has been named secretary of Berkshire Woolen Co., Pittsfield, Mass., to succeed **Harding W. Whitney**, retired. **Francis C. Heidel** has been named to assume the other duties of Mr. Whitney, including inventory control and supplementary purchasing agent. Mr. Scheufler will continue as assistant treasurer.

Herbert J. Smith has been named vice president and general manager of Charlottesville Woolen Co., Charlottesville, Va.

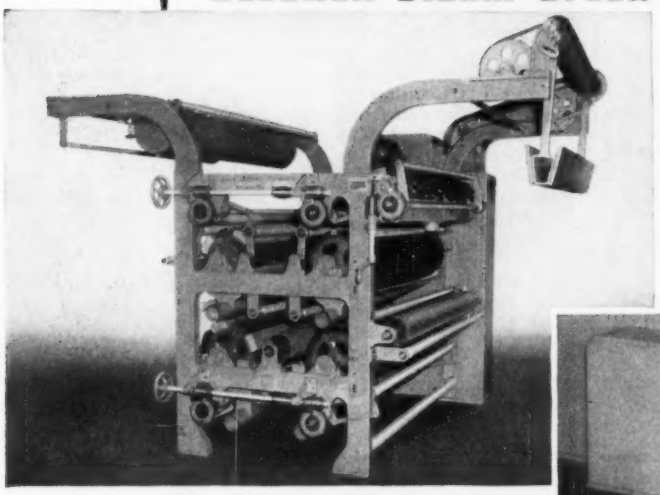
L. F. Smith has been named assistant to the general manager of Woods Mfg. Co. Ltd., with headquarters in Montreal, Que.

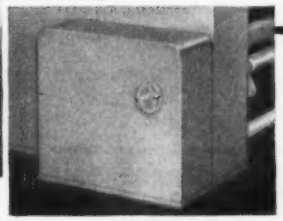
Henry E. Stehli has been named chairman of the board of Stehli & Co., Inc., New York, N. Y. **Henry C. Monroe** has been named president and will continue as treasurer. **Robert H. Stehli** has been made senior vice president.

Clear out and soften your fabrics on this new GESSNER Steam Brush

Designed especially for fabrics which must be cleared out and softened, Gessner's newly developed Steam Brush utilizes two brushing cylinders clothed with nylon brushes, two clothed with sandpaper and nylon bristles in alternate strips, and a spiral nylon back brush. The cylinders are accurately balanced for the high speed operation which increases brushing capacity up to 80 yards per minute.

Positive chain drive eliminates both belt slapping and slippage, and Centralized lubrication reduces maintenance time. A variable speed drive, which is optional, and independently adjustable contact rolls with indicator, are two other of the 20 different features of this new brush. When it comes to brushing, come to Gessner.





Gessner Four Cylinder Steam Brush. Inset shows Variable Speed Control on far side of machine.

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WORCESTER, MASS.
CANADIAN REPRESENTATIVE: W. J. WESTAWAY, MONTREAL, QUEBEC; HAMILTON, ONT.

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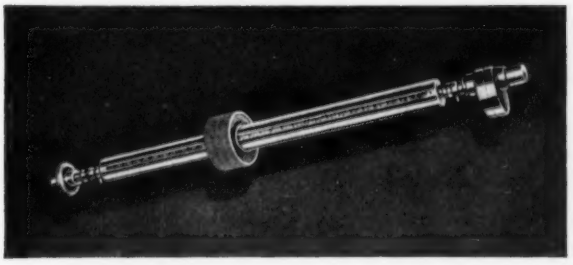

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Cotton yarns, single and ply
Carded and Combed
Cotton warps, single and ply
Colored yarns and warps
Spun rayon—yarns and warps

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AMERICAN & EFIRD YARNS

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As advertised in leading magazines

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Combed Peeler or Sak, 10's-90's Single
Combed Peeler or Sak, 10's-100's Ply
Carded Peeler, 8's-30's Single

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GREENVILLE, S. C. FALL RIVER, MASS.

News About MEN

(Continued)

Edward Smith continues as executive vice president.

Colyar S. Tatum, secretary and general manager of Pilot Mills Co., Raleigh, N. C., has been elected president to succeed the late **Karl G. Hudson. Sam Riley, Jr.**, has been promoted from assistant general manager to general manager.

Allan W. Taylor has been appointed manager of the Clarksville Dyeing & Finishing Plant, Clarksville, Va., a division of Robbins Mills, Inc.

Forrest E. Tugman has been elected president of the recently incorporated Peerless Hosiery Co., North Wilkesboro, N. C. **Hazel H. Turner** is secretary and **John F. Kerr**, treasurer.

Russell Wagner has been named overseer of the weave shop at Peerless Woolen Mills, Rossville, Ga., succeeding **James Watters**, who is retiring.

Walter W. Weismann, formerly chairman of the board of Modern Globe, Inc., Grand Rapids, Mich., has been elected president. He succeeds **Ray A. Ferguson**, resigned.

Russell West, formerly overseer of dyeing at Raleigh Mills, Raleigh, N. C., has joined Barrymore Mills, Toronto, Ont., in a similar capacity.

Howard Wilcox has been named overseer of carding at Glen Woolen Mills, Inc., Norwich, Conn.

Andrew J. Wishart has been appointed treasurer of Dominion Textile Co. Ltd., Montreal, Que., Drummondville Cotton Co. Ltd., Drummondville, and Montreal Cottons Ltd., Valleyfield. Mr. Wishart succeeds **R. A. Lang**, retired.

John F. Yerick has resigned as overseer of dyeing and bleaching for F. C. Huyck & Sons, Rensselaer, N. Y.

OBITUARY

Britt M. Armfield, 52, vice president and director of Klopman Mills, Inc., Greensboro, N. C.

Thomas B. Bohnen, vice president of Hub Hosiery Mills, Lowell, Mass., and head of the New York office.

A. B. David, 69, chairman of the board of Echota Cotton Mills and Hyway Arts, Inc., Calhoun, Ga.

Robert M. Easdon, 66, retired superintendent of Cranston Print Works, Cranston, R. I.

Abraham Falik, 72, vice president of Charles Peberdy & Son, Inc., Philadelphia, Pa.

Lewien B. Foss, 66, retired general manager of the Guilford Woolen Co., Guilford, Me.

Harold A. Giffin, 58, resident manager of Beaverbrook Mills, Lowell, Mass.

Edward W. McCaffrey, Sr., 78, retired foreman of the combing department of Steere Worsted Mill, Providence, R. I.

William A. Reid, 74, retired superintendent of Gate City Cotton Mills, Atlanta, Ga.

Edward J. Stephen, 41, superintendent of Paris Woolen Mills, Stayton, Ore.

Walter A. W. Stewart, 83, assistant treasurer of The Merrow Machine Co., Hartford, Conn.

Max W. Stoehr, 71, former president and chairman of the board of Botany Mills, Inc., Passaic, N. J.

Albert E. Thornton, 67, vice president and a director of Southern Mills, Inc., Atlanta, Ga.

Irving H. Verry, 80, retired vice president of Crompton & Knowles Loom Works, Worcester, Mass.

Alfred V. Wright, 57, a director of Kenwood Mills Ltd., Armprior, Ont.

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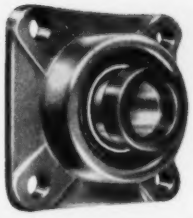
YOUR CHOICE OF THREE SUPERIOR METALS is assurance that your fence will best meet your needs. Choose heavily-galvanized Copper Bearing Steel, or long-lasting Stainless Steel, or corrosion-resisting Aluminum. Interlocking wires are woven to form a strong, uniformly square mesh.

EIGHT BASIC STYLES, varied by choice of metals, wire gauges, heights, types of gates, posts and post tops, and top rails. Tension and fabric bands not removable from outside. Gate frames welded at joints.

IT'S TIME TO THINK, AND ACT. Page Fence is expertly erected by technically trained firms conveniently located throughout the country. For illustrated PAGE data and name of nearest firm . . .

Write to PAGE FENCE ASSOCIATION in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, New York or San Francisco.

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.



no service schedules needed for *LIFE-LUBE* bearing units

Wood's pre-lubricated Pillow Blocks and Flange units give you trouble-free operation *for life.* Scientifically designed to provide permanent lubrication . . . means no lubrication is necessary once they leave our factory.

Neoprene seal keeps grease in, foreign matter out. Install Life-Lube and tear-up bearing service schedules. Sizes from ½" to 2 15/16". Wood's bearings for all operating conditions are available through Industrial Distributors. Write for Bulletin 194.

T. B. Wood's SONS COMPANY

CHAMBERSBURG, PA.

Mechanical Power Transmission Manufacturers—Since 1857.

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CALDWELL TANKS—

First Choice of the Textile Industry!

Caldwell offers the industry a complete tank service, including solid Stainless and Stainless-lined wood tanks and tubs, of any shape or size.

If you're thinking of installing or replacing a tank, let our 60 years' experience in building high-grade tanks serve you. *Send for our catalog, today!*

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ROME SOAP MFG. CO.

WRITE US FOR SAMPLES AND QUOTATIONS

MANUFACTURERS OF

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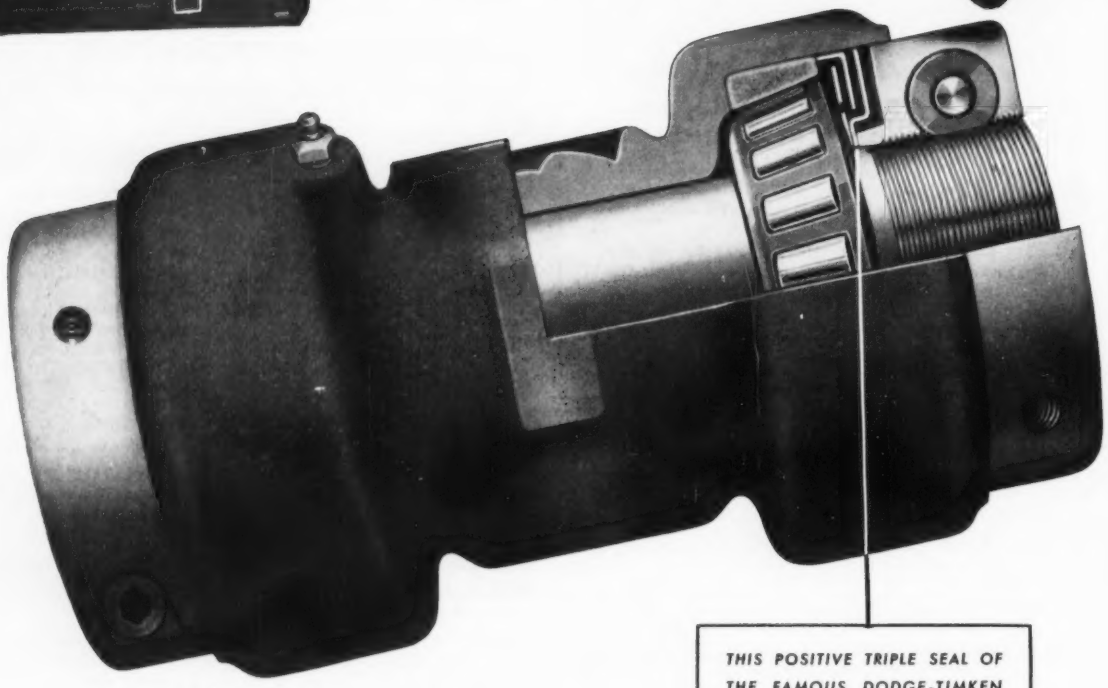
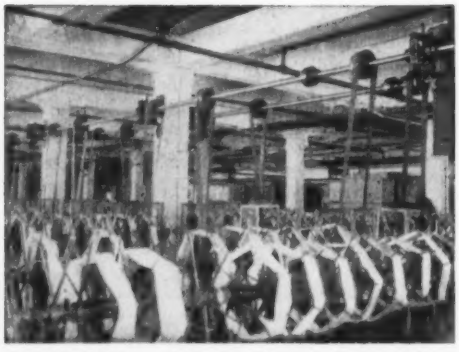
SPINNING MACHINERY FROM INGOLSTADT THROUGHOUT THE WORLD!

DEUTSCHER SPINNEREIMASCHINENBAU INGOLSTADT *Ingolstadt/Oberbayern*

Stops Oil Damage!



THIS POSITIVE TRIPLE SEAL OF THE FAMOUS DODGE-TIMKEN TYPE C BEARING ELIMINATES OIL DRIP... HERE IS THE IDEAL BEARING FOR TEXTILE MILL USE!



This installation of Dodge-Timken Hanger Bearings protects quality and profits. Special seals prevent oil leakage on the product, reduce "seconds." Bearings remain properly lubricated, saving labor.

IS OIL DRIP eating holes in your profits? To keep the lubricant where it belongs—*inside the bearing*—switch to Dodge-Timken. These famous bearings, noted throughout the world for quality, have proved themselves in millions of industry's toughest jobs.

The type C Dodge-Timken Bearing is especially adapted to use in the textile field. Its indestructible steel seal positively prevents lubrication leakage—definitely cuts a mill's loss from "seconds."

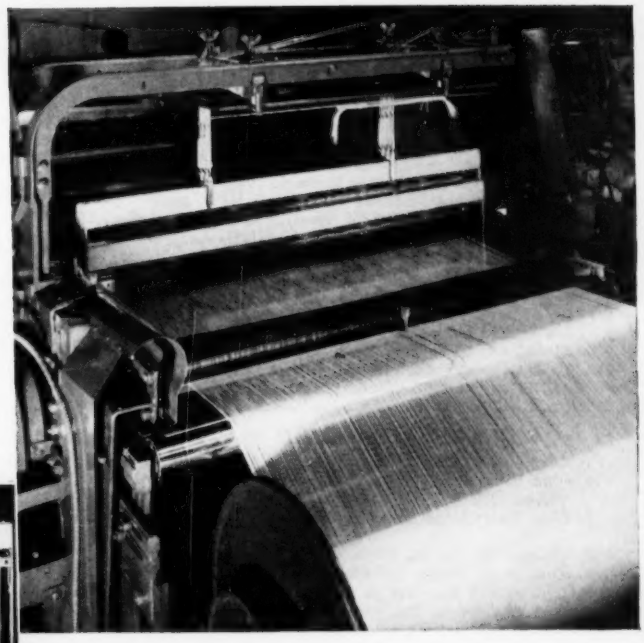
Available from distributors' stocks—in shaft sizes from 1-7/16" to 3-15/16". Completely assembled, factory adjusted, pre-lubricated and ready to install on the shaft for a minimum of 30,000 hours of uninterrupted service. Call your nearest Dodge Transmissioneer. Or write us for detailed bulletin.

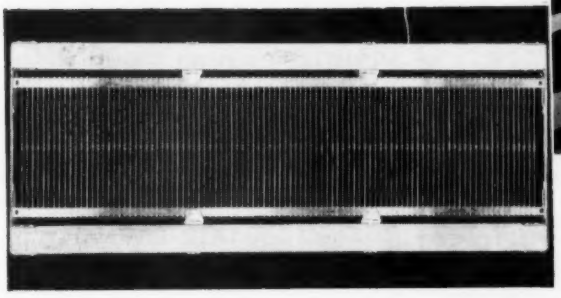
DODGE MANUFACTURING CORPORATION
1400 Union Street • Mishawaka, Indiana

CALL A DODGE TRANSMISSIONEER. He's factory-trained to help solve your power drive problems. Look for his name under "Power Transmission Equipment" in your classified telephone directory.

DODGE
of Mishawaka, Ind.

How Stainless Steel Reeds and Heddles CUT COSTS





Cutting maintenance costs at the loom is a sure bet when reeds and heddles are made of Armco Stainless Steel wire.

"They accumulate less scum, and can be cleaned much faster and easier than parts made of plated wire," according to a manufacturer of "synthetics."

"Cleaners have no harmful effect on the surface of stainless steel," he said. "This certainly simplifies our clean-up work."

NO RUST SPOTS

Yarns and threads get off to a clean start when reeds and heddles are Armco Stainless Steel. You needn't worry about rust spots or dirt-embedded knots — a costly problem with ordinary heddles and reeds.

Lower cleaning and maintenance costs are the story when other parts, such as bobbin boards and spindles, are made of Armco Stainless.

Get complete information first-hand from fabricators who use Armco Stainless Steels. If you do not know the names of leading suppliers of stainless heddles, reeds, bobbin boards and spindles, just fill in the coupon on this page.

We'll be glad to put you in touch with them.*

*Armco Stainless Steel sheets, strip and plates are also widely used by fabricators of textile wet-processing equipment.

ARMCO STEEL CORPORATION

4823 Curtis St., Middletown, Ohio

Export: The Armco International Corp.

ARMCO

MAIL THIS FOR DATA

ARMCO STEEL CORPORATION

4823 Curtis Street, Middletown, Ohio

WHO MAKES THIS EQUIPMENT?

☐ Heddles ☐ Reeds

☐ Spindles ☐ Bobbin Boards

NAME _____ TITLE _____

COMPANY _____

STREET _____

CITY _____ ZONE ____ STATE _____

LIQUIDATION OF MODERN COTTON SPINNING MACHINERY IN OPERATION

10—Blending Feeders and 2 Feed Tables 40' long
2—Saco Lowell #12 Opener and #11 Condenser Units—1950
4—Saco Lowell Single Process Pickers, 40", rebuilt 1950
100—Whitin & Saco Lowell Cotton Cards, 40", 27" doffers
120—Deliveries Saco Pettee Drawing Frames
2—Woonsocket Slubbers 12 x 6, 72 spdls. each
6—Whitin Interdraft & SL Controlled Draft Slubbers, 10 x 5
3—Woonsocket Speeders 10 x 5, Whitin Long Draft
50—Saco Lowell Spinning Frames, 3½" ga., 2¼" r., 240 spdls.
6—Foster #102 Winders, 100 spdls., tubes and cones—1950
9—Saco Lowell Twisters, 1,104 spdls., 5½" ga., 4½" r.
125—Saco Pettee 45" Cotton Cards, 27" doffers
70—Whitin Long Draft Spin. Frames, 3¾" ga., 240 sp.
10—Whitin Long Draft Spin. Frames, 3¾" ga., 252 sp.
9—Universal #44 Roto Coner Winders, 100 spdls.
2—Universal #52 Winders, 100 spdls.

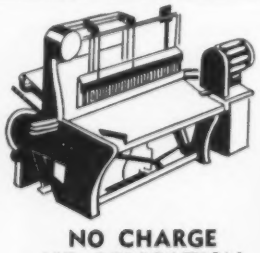
ADDITIONAL MODERN MACHINERY FOR SALE

1—Marshall & Williams Tenter Frame & Housing 90' x 72", Age 1948
1—Van Vlaanderen Pneu. Embossing Calender, 54" wide, Treebark, 9-ton, Age 1952
1—Van Vlaanderen Semi-Decater 50", pump, blanket & motor, Age—1948

200—Draper XD Looms, 46" cloth, 20 harness dobby, motor, Age 1947
225—Draper XD Looms, 56" cloth, 20 harness dobby, motor, Age 1945
126—Crompton & Knowles S6 Looms, 20 harness dobby, motor, Age—1947
7—Abbott Quillers, 100 spdls., 7 ⅜—9" quills, Age—1946—1950
1—Whitin Schweiter Quillers, 2—30 spdls., 1—15 spdls. Age—1952
2—Cocker Slashers 60", 7 Stainless Steel Drumss 30" dia. Age—1948

Telephone Cortlandt 7-1591

REPUBLIC TEXTILE EQUIPMENT CO.
40 WORTH STREET NEW YORK CITY
Purchase and Sale of Used Machinery
REFINANCING · APPRAISALS · PURCHASE · SALE · LIQUIDATION OF MILL PROPERTIES



NO CHARGE NO OBLIGATION

This service is aimed at helping you, the reader of TEXTILE WORLD, to locate used and surplus new textile machinery and equipment not currently advertised. (This service is for user-buyers only.)

SEARCHLIGHT Equipment Spotting Service

First, read the dealer ads on the following pages. A 5-minute study may locate the equipment now.

Second, send in the specifications of the equipment wanted on the coupon below, or on your own company letterhead, to

Searchlight Equipment Spotting Service
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330 W. 42nd St., N. Y. 36, N. Y.

Your requirements will be brought promptly to the attention of the used equipment dealers advertising in this issue. You will receive replies directly from them.

Searchlight Equipment Spotting Service
c/o Textile World
330 W. 42nd St., N. Y. 36, N. Y.

Please help us locate the following used equipment:

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NAME..... TITLE.....
COMPANY .....
STREET .....
CITY..... ZONE..... STATE.....

MEN WANTED

POSITIONS OPEN

We can place—SUPTS., asst. supts. and designers for woolen, worsted, cotton and rayon fabric mills; supt. silk throwing; production mgr. sweater mill; personnel director; quality control production man on knitted fabrics.

OVERSEERS for worsted drawing, spinning and twisting; woolen frame spinning; cotton carding; tubular knit goods, cotton-rayon piece goods, raw stock and woolen yarn dyeing; woolen weaving; woolen finishing; woolen carding; put-up dept.

CHEMISTS, chem. engineers and laboratory men; laboratory research man cotton fibres; industrial-time study engineers; plant engineers; cot. slasher tender; chief accountant; sewing mach. fixers; loom fixers; hosiery mach. fixers.

LIST YOUR CONFIDENTIAL APPLICATION WITH US to keep informed of attractive positions open in the textile mills. SEND US YOUR RESUME.

CHARLES P. RAYMOND SERVICE, Inc.
294 Washington St. Boston 8, Mass.
Telephone Liberty 2-6547

SPECIALISTS IN PLACING AND IN SUPPLYING TEXTILE MILL EXECUTIVES

POSITION WITH UNUSUAL OPPORTUNITY

● Young man not over 35 with knowledge of Textiles and some mechanical inclination for position as installation and service technician with textile finishing machinery company. Position has permanency, offers a constant challenge with opportunity for considerable travel. Replies held confidential.

P-9616, Textile World
330 W. 42 St., New York 36, N. Y.

TEXTILE EDITOR WANTED

Must have had practical experience in woolen and worsted manufacturing. Extensive knowledge of synthetic fibers required. Experience in writing for publication preferred. Age 25 to 40. Give details on education, former connections, salary, etc., in first letter.

P-9314, Textile World
330 W. 42 St., New York 36, N. Y.

REPLIES (Box No.): Address to office nearest you
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CHICAGO: 520 N. Michigan Ave. (11)
SAN FRANCISCO: 68 Post St. (4)

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THROWING SUPERINTENDENT desires employment with reputable concern. Have good sound knowledge of throwing rayon, nylon and silk. Capable of establishing, reorganizing or assuming complete charge of department or throwing plant. Married, References. PW-8889, Textile World.

GARNETT FOREMAN has 27 years experience on all kinds of stock. Can set up file and grind garnetts. Also experience on mixing stocks for card room. References. PW-9399, Textile World.

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FOR SALE as long as they last; limited number of a mimeograph and blue print edition of Fabric Design. First time offered to the public. Aimed at beginners in Textile Design. L. O. Bunton, 1409 Ave. S, Lubbock, Texas.

EATON & BELL

Patent Attorneys

904 Johnston Bldg., Charlotte, N. C.
1149 Munsey Bldg., Washington, D. C.

Additional Employment & Business Opportunity Advertising on page 294.

AT AUCTION

In Complete and Entire Liquidation

The Entire Manufacturing Facilities of

WALTHER MANUFACTURING COMPANY

Manufacturers of Fine Woolens and Worsteds

ERIE AND CASTOR AVES. **PHILADELPHIA, PA.**

Real Estate
Machinery, Equipment and Stock of Yarn

TO BE SOLD ON THE PREMISES
TUESDAY, NOV. 10, 1953, AT 11 A.M.

REAL ESTATE

Industry's "Park Avenue" of Philadelphia—The Capital City of the Delaware Valley.

Group of Brick, Steel and Reinforced Concrete Buildings; Freight Elevators; Boiler House for Heating and Process Steam. Fully Sprinklered throughout. Heavy Floor Loads. Good Ceiling Height. Excellent Truck Loading Access. Abundant Transportation Facilities.

Aprox. 2 Acres of Vacant Ground—Zoned Industrial. Approx. 92,800 sq. ft. of Manufacturing Floor Space. Approx. 11,800 sq. ft. Office Building.

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MACHINERY AND EQUIPMENT

72 Crompton & Knowles W-2 m. d. 82 in. Automatic Looms; 2 Rodney Hunt Tru-Shade 8 and 10 ft., 10 and 24 end Stainless Steel m. d. Piece Dyeing Machines; Tru-Shade s. s. m. d. 24 in. Type C Sample Dyeing Machine; Abbott 120-spindle continuous m. d. Filling Winder; Oswald Lever 20-spindle m. d. Cop Winder; James Hunter 26 B and No. 10 Fulling Mills; Davidson 66 in. m. d. 3-Blade High Speed Shear; Schlick 56 in. m. d. High Speed Warper and 500 Separate Lots of Woolen and Worsted Machinery and Equipment.

YARN—APPROX. 50,000 LBS.

Approx. 16,000 lbs. 1/25 Various Colors
Approx. 11,000 lbs. 2/40 Various Colors
Approx. 10,000 lbs. 1/20 Various Colors
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Why You Should Consider A Career at Celanese

One of the country's most research-minded organizations, Celanese provides an excellent working environment.

The major expansion of its modern research laboratories, located in Summit, New Jersey (a pleasant residential community within 50 minutes of metropolitan New York City), offers a challenge to the following men:

RESEARCH ENGINEERS

ME, ChE or Physics degree, experience in textile or related industry. To design and conduct experiments to develop basic understanding of fiber usage from an engineering standpoint, including studies on conversion of fibers into yarns, yarns and continuous filaments into fabrics, and fabrics into end use products.

RESEARCH CHEMISTS

BS with 3 to 5 years experience or PhD with 1 to 2 years experience for basic research and development of colloidal chemistry phenomenon as it pertains to fiber and textile surface absorption, penetration, diffusion, swelling and adhesion.

These are permanent positions offering salaries based on experience and ability. Promotional opportunities are excellent.

Please submit complete resume indicating initial salary requirements to:
Mr. J. A. Berg, Head—Personnel Administration

Celanese CORP. OF AMERICA
SUMMIT, NEW JERSEY

NEW AND USED MACHINERY

DYEING
PRINTING
FINISHING
POWER

2—Morrow Sewing Machines, 60 D3B, 60 AB, complete with tables and motors.
19—72"x23" dia. Textile Copper Dry Cans, siphon type.
1—48" Parks & Woolson Semi-Decater.
6—Tillinghast Portable Sewing Machines.
1—Miller Co. Pin Dryer 1946.
1—Oster 1½" to 6" Pipe Threader & Cutting Machine.
1—60" 2 Roll Merrisen Quetch.
2—Parks & Woolson 65" Double Shearing Machines.
1—Butterworth 80' Pin Tenter Frame 72" max. 18" min. width.

Also available—Motors, Reeves drives, Calender Rolls, ager rolls, etc.

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"ON ROUTE 6 BETWEEN FALL RIVER AND PROVIDENCE"

5—WHITIN MODEL B TWISTERS, 3¾" GA., 2½" RING, TAPE DRIVE, 240 SP/FR. MOTOR & STARTERS
29—40" PETTEE CARDS
4—WHITIN MODEL A CONDENSERS
70—W3 C&K 82" BS, 4x1, 25 HARNESS LOOMS
125—DRAPER L MODEL LOOMS; 85-90"; 40-100"
4—SACO-LOWELL 10x5, 8" GA.; FS2 OR J3 DRAFT

Thackston & Redding, Inc.

702 MONTGOMERY BLDG. SPARTANBURG, S. C. PH. 5497

TEXTILE AUXILIARIES

For Sale **"SPECIAL"** **Immediate Delivery**

1—72" Birch Bros. (1952) Two Roll Heavy Pneumatic Padder, 15 Ton Uniform Pressure. Rubber Rolls 20" diameter, with Self-Aligning Roller Bearings; 5 H.P. U.S. Syncrogear-Varidrive Motor; also, with late style Mt. Hope Guiders and Stand; Quincy ¾ H.P. 2½ x 2½ Horizontal Air Compressor.

1—Set of 3 Drying Cylinders, 5 ft. x 57½ in. face, copper-tinned, ball bearing Johnson Rotary Joints, stands, drives, temperature recorder and S/S idler rolls.

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146 West River St. Telephones Dexter 1-9650 1-8837
We Specialize In Finishing Equipment.

PROVIDENCE, R. I.

WANTED

TWO EXECUTIVES

One is to take full charge of a group of cotton mills. Must have a successful record in handling help and be able to assume full responsibility.

The second is for an executive to take full charge of bleaching, dyeing, finishing, napping and printing operations on cotton fabrics. This position also is a man-sized job.

The two positions will pay attractive salaries for qualified men. Telephone, telegraph or write in confidence to—

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WANTED EXPERIENCED TEXTILE MECHANICAL ENGINEER

Familiar with Carpet Manufacturing Machinery.
One with imagination and knowledge necessary to design, direct development and improvement of equipment as well as manufacturing processes.
Splendid opportunity for right man.
Write in strict confidence, giving age, educational background, and complete history of your experience.

OLSON RUG COMPANY
2800 N. PULASKI ROAD
CHICAGO 41, ILLINOIS

DESIGNER

Designer with fabric experience capable of creating good floral designs required by large eastern national floor covering manufacturer. Write giving training, experience, age and salary requirements to

P-9517, Textile World
330 W. 42 St., New York 36, N. Y.

OPPORTUNITY WANTED

Textile Engineer, College graduate, wants opportunity to develop small or slack business for a part interest in company. Some capital. Will consider any legitimate proposition anywhere.

Box 9489, Textile World
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COMPLETE MACHINE SHOP

equipped for doing Textile Machinery, and parts, including buildings, Textile Machines and parts.

DOYLE & MILLER
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FOR SALE

AMERICAN MOISTENING HUMIDITY SYSTEM

Complete with 172 atomizers, 3 water control tanks, 8 Humidity controls, air and water piping. 1 Penn. air compressor size 10 x 9 class 3AT RPM 325 with 50 H.P. 550 volt motor, intake filter, aftercooler, separator, drain trap and vertical air receiver tank 30" x 7". 1 Penn. air compressor size 12 x 8 class 3A RPM 325 with 25 H.P. 550 volt motor, intake filter, aftercooler, separator, drain trap and vertical air receiver tank 36" x 6'6".

Above equipment approximately 6 years old and in excellent condition. Will sell at a sacrifice price.

FS-9488, Textile World
330 W. 42 St., New York 36, N. Y.

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ALL MILLS IN WORSTED DIVISION

LOCATED AT 120 MANTON AVE., PROVIDENCE, RHODE ISLAND

CHARLES R. DEAR IN CHARGE OF SALES

SALE OF MACHINERY—BUILDINGS OF ALL TYPES AND DESCRIPTIONS
$6,000,000 NEW MACHINERY INVESTMENT LAST DURING 36 MONTHS

WOOL SCOURING—CARDING—COMBING

SCOURING TRAIN—SARGENT—1951—LOT 3200
4 Bowl—60" Automatic Feed, Weigh Wool Opener, Automatically maintained temperature controls, pneumatic loading devices—variable speed drive complete with automatic air and humidity controlled dryer

CARDS—18—60" 3 cylinder Proctor-Schwartz #461—1948—Lot 3000 Metallic Clothing—Model 535—Automatic Large Hopper Feeds

NOBLE COMBS—24—JAS. SMITH—PRINCE SMITH—1950—Lots 2901-2902-2903 Electric stop motions. Air suction Noil Conveyors.

PIN DRAFTERS—Warner Swasey—1951
6 Duals—Model M-2350—Lots 2400—2401
6 Quads—Model M-2380—Lot 2402
Stop Motions—Controls from 4 positions—Fully Automatic

BLENDERS—HOLDSWORTH—1952
3 Single Delivery—Single Head—Lot 2700
2 Quad Delivery—2 Head—Lot 2701

TOP DYE—HUNTER—1952
All Stainless Steel—Electric Lift—Bristol Temp. Controls
2 Machines—10 Spindle—1000 lbs.—Lot 2500
2 Machines— 4 Spindle— 400 lbs.—Lot 2501
5 Machines— 2 Spindle— 200 lbs.—Lot 2502
2 Machines— 1 Spindle—Sample—Lot 2503
Complete with Stainless Steel mixing barrels

BACKWASHERS—SARGENT
1 5 Bowl 1952 with 3 apron dryer—Reeves drive—Lot 2504
Complete with Holdsworth 4 head Intersecting Gill—Lot 2506
1 3 Bowl 1942 with 3 apron dryer—motor drive—Lot 2505
Complete with Holdsworth 4 head Intersecting Gill—Lot 2507

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SPINNING FRAMES—WHITIN—Model F-W-3 1951—Lot 2200
Complete with Pneumafil Automatic Lubrication for head ends and cylinder bearings.

116 Machines @ 200 spindles—4½" Gauge Ring Diameters—mostly 3" Few @ 2-¾" and 2-½".

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WINDERS—Schweiter—1945—Lot 1800
8 Frames—30 Heads per frame—15 Heads per unit—2 Units per motor

SLASHER—SACO LOWELL—1948 Lot 1500
Multi-Motor Drive—forced hot air dryers

JACK SPOOLING—DAVIS & FURBER—Model 60—1952—Lot 1400—3 Machines—48 End Delivery—Wamesit Creel high speed machines with automatic doffers

DRESSING FRAMES—DAVIS-FURBER—1952—Lots 1401 to 1406—3 Machines complete with Spool Creels, Hack Stands, 92" Reels, Compressors and Beamers—variable drives

LOOMS—CROMPTON & KNOWLES 4X1 Box
96 W-2 Convertible—1937 Lot 800
221 W-2 Non-Convertible—1939-1945 Lot 801
56 Intermediate Non-Convertible—1928 Lot 803
48 4 x4 Box Looms—1930 Lot 804

FINISHING

WET FINISHING—RIGGS & LOMBARD Fleetline Continuous Washer—1946—Lot 719—14 Compartment (wood) 6 soap bowl—8 rinse bowl (5 Reversible rinse) complete with gear head motors—Control Panel

WET FINISHING—BIRCH BROS.—Singer—1951—Lot 740—4 Burner open flame 60" to 84" width capacity—adjustable frame—brass mounted guide rolls

DRY FINISHING—PARKS & WOOLSON—Triple Blade Shear—1946—Lot 503—66-½" Plain Rests—Motor Drive

DRY FINISHING—ANDREWS-GOODRICH—Cloth Conditioner—1951—Lot 502—#1606 complete with Reeves Drive

DRY FINISHING—GESSNER—Press and Hydrolyser—1939—1952—Lots 513, 512—Model H-Y-139 Slatted conveyor between press and hydrolyser

This is only a partial listing. We have various additional types of machinery including Power Units, also Trucks, Containers, Bobbins, Loom Beams, etc. Also various types of Fluorescent Lighting.

INQUIRIES BY LETTER—INSPECTION BY APPOINTMENT

A. D. JUILLIARD AND COMPANY INC.

120 Manton Ave. **Telephone Elmhurst 1-9000** **Providence (9) Rhode Island**

FOR SALE

COMPLETE RAYON SPINNING UNIT

Installed in 1951 and 1952
Saco-Lowell — Latest Type

Includes Opening, Picking, Carding, Drawing, Roving, Spinning, Coning, Winding and Laboratory Equipment.

6336 — Spindles — Saco-Lowell Z-2 WW Frames
24 Frames of 264 Spindles Each
2½" Ring, 4" Gauge and 9" Traverse

USED EQUIPMENT—AVAILABLE IMMEDIATELY

HUNTER CARBONIZING TANK — **Item SLCS-E**
Lead-lined Cypress Tank
Fittings acid resisting metal
Nip Rolls rubber covered 90" wide—never used

GESSNER TEASEL GIG & BRUSH RANGE — **Item GTG-B**
New 103—Used 3 Months
68" Working Width

4 BLADE HERMAS SHEAR — **Item HCT-J**
80" Working width—New 1951—Electric driven

WHITIN QUILLER—MODEL "J" — **Item L-WQ**
304 Spindle—3½" Gauge—10½" Traverse

COLLINS & AIKMAN CORP.

SALES & SALVAGE DIVISION

5th and Upland Avenue — PHONE CHESTER 3-4167 — Upland, Delaware Co., Pa.

PREPARATORY

8—Harwood, Sargent 42"—54" Picker Feeds
1—Whitin E-3 Card Feed, 60"
6—D. & F. & Sargent 6, 8 Bar Mixing Pickers
2—48" D. & F. Fearnought Pickers
6—18"—24" Shoddy or Waste Pickers
2—36"—48" Burr Pickers
2—Dusters, Cone or Box type
1—Ceiling Condenser 36" x 36"

WINDING & WARPING

Universal 50's & 90's rebuilt
2—Universal 6C Winders, 8" pkg.
1—Foster Mod. 12 Skein Winder
1—Foster Mod. 101 Cone Winder
1—Sargent 16 sp. Ball Winder, 1948
4—D. & F. Pin or Pinless Warper

FINISHING

2—Butterworth 66" 4-roll Padders
1—Gessner Mod. 20 Press, 1950
1—P. & W. 72"x36" Semi Decater, 1948
1—Set (6) Copper Dry Cans, 70"x36"
1—Wetting-Out Tank, S/S Lined, 62"
1—P. & W. 72" Steam Luster Machine
1—Crab, 3 bowl, 72", Yorkshire Type
2—Birch Doub. & Tack. Mach., 92"
2—Teasel Gigs, Doub. Cyl., 60"
1—P. & W. Cloth Doubler, 66"

MISCELLANEOUS

4—Macbeth Color Matching Lamps
1—72" Latex Coating Machine
1—P. & S. Cyclone Dust Colector, 1949
1—Nash No. 4 Hytor Pump
1—Singer Overlocker

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1 H&B Tomlinson Waste Opener
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1,500 Roving Cans, 10"
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800 ¼ H.P. 220V Loom Motors 1800 RPM
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Hundreds assorted loom & regular—ask for list—Send for list
300 Electric stop motions complete 4 bank
200 Sliding Bar Stop Motions complete 4 & 6 bank
4,000 Sliding Bar Stop Motion rods
50,000 Heddle Frames 44" to 80" for 10, 11, 12, 13", 14" heddles
3,000,000 Standard and duplex new & Used heddles
500,000 Stainless steel heddles 13"
150 24" dia. loom beams, 44" b/h NEW 6 pitch gear

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HIGH SPEED
WINDERS

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NYLON SIZING MACHINES
Complete with circulating system and viscometer.

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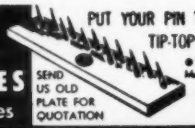

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1 36" Self Balancing Extractor
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1 W&J Tenter Frame 54" W 30' L
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1 19 can Butterworth dryer 72"
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4 Three (3) Roll Padders 45"
30 50" Dry Cans
4 Johnson Slashers—7—5—3 Can 66"
2 90" S.S. Jiggs
4 50" S.S. Jiggs
1 72" Greige Washer with Squeeze Rolls 24' long
5 Atwood 5B Twisters
9 Atwood Single Deck Utility Spinners
8 Sipp Warpers and Winders
20 #90 Universals
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5 Foster-Coners 75A
Hy-speed Sippwarper & 600 Cone Creel

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6—Textile Squeeze Sets, 96" long, 2 Rubber Rolls 19" & 12" dia. roller bearings.
1—set 23 Copper Dry Cans-60" x 23" with vacuum extractor.
1—set 23 Copper Dry Cans-60" x 23" with vacuum extractor.
1—set 15 Copper Dry Cans-64" x 23'-M. D.
1—set 8 Copper Dry Cans-84" x 23"-M. D.
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cold rolled steel backs — side take-off In first-class condition — ready to run

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Single head—equipped with electric stop motions and furnishing wheels. Suitable for coating fabrics, terry cloth and wool jersey. Any gauge desired. Both 28" and 32" cylinders on four machines. Also moulds and extra parts.

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12 C&K, Type W-3 looms.
Excellent condition. New 1939.
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Janesville, Wisconsin

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3 PERKINS TRICOT KNITTERS
Complete to Run.

Includes 168" insides, complete with motors V. Belt drive. Includes two sets of 15 ft. beams also one Lebernecht same as above except it is adaptable to 3 Bar Knitting. All set for 150 R.P.M.

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60" face x 60" diameter impression cylinder. Perfect condition. Excellent for printing vinyl, acetate, oil cloth or textiles. Can also be converted to 6-colors.

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All equipped with Bunch Builders
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1 Daniels RAG CUTTER, 2 blade Cylinder 12½".
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1 D&F Iron Fearnaught PICKER, 48" x 54", chain driven Workers & Strippers.
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1 Foster Model #12 Combination Paper TUBE AND CONE WINDER, 60 spdls.
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1 Woonsocket FELTING NAPPER 22 roll, 80".
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1 D&F S. A. NAPPER, 14 Roll, 72", Folder Take-off.
1 Woonsocket S. A. NAPPER, 12 Roll 80", Folder Take-off.
1 P&W Model A SHEAR, Double Cutter 66½".
1 P&W Manchester SHEAR 3 blade 66".
1 C&M STEAMING, SHEARING & BRUSHING RANGE 66".
1 SQUEEZE SET, 3 S.S. Rolls, B.B. Mounted, 60¾" x 10" Dia.
1 TENTER FRAME for Knit Goods 25' x 78" width, double dow Steel Pins, steam pipe, Blowers and Fans.
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20 Tons 6" x 16.3# x 25/50'
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21 Tons 8" x 20# x 20/50'
8 Tons 8" x 23.9# x 40'
15 Tons 9" x 25.4# x 40/50'
10 Tons 10" x 21.9# x 40'
15 Tons 10" x 24.9# x 21/44'
25 Tons 10" x 28.3# x 28/60'
40 Tons 10" x 41.1# x 21/63'
5 Tons 12" x 37# x 25/35'

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10 Tons 4" x 13.8# x 40'
3 Tons 12" x 35# x 40'
8 Tons 13" x 31.8# x 50'
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20 Tons 10" x 8.4# x 40'
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1—40 Spindle Foster Model #12, skein to cone

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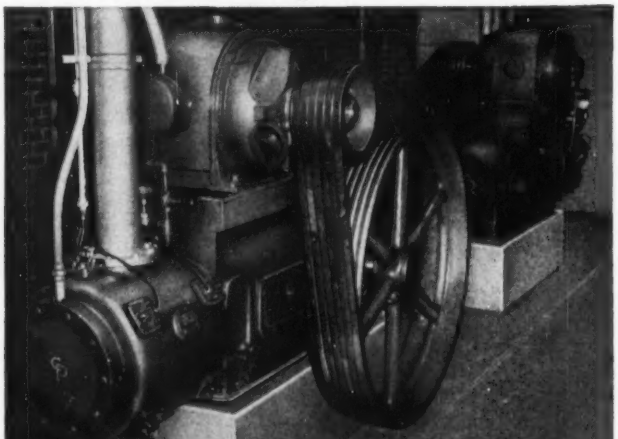
CP compressors pay BIG dividends in dependability



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Chicago Pneumatic

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A HELP TO YOU. The reader will find that this unique TEXTILE WORLD index, particularly if consulted for two or more consecutive issues, affords a surprisingly complete source of information on the latest products and services available to the textile industry. Its comprehensiveness is the result of the fact that TEXTILE WORLD, having the largest circulation and highest readership of any textile-mill magazine in the world, carries the largest volume of advertising.

HOW TO USE. First, look in the table below and find the letter that designates the class of supply or service that you currently need. Then consult in the index the page numbers that are followed by that letter.

A. Air Conditioning, Air Cleaning
B. Building Construction and Maintenance, Paints, Yard Equipment, Water Supply
C. Chemicals and Dyestuffs
D. Cleaning Equipment
E. Dyeing, Finishing, and Cloth-Room Equipment and Supplies
F. Electrical Equipment—Motors, Controls, Lighting, Etc.
G. Fibers, Yarns, Mills, Finishing Companies
H. Fluid Handling.—Compressors, Pumps, Piping, Valves, Fittings
K. Instruments: Measuring, Metering, and Weighing Apparatus
L. Knitting-Mill Equipment and Supplies
M. Lubricants and Lubrication Equipment
N. Management Services—Factors, Consulting Engineers, Insurance, Personnel Facilities, Plant Sites, Etc.
O. Materials and components for Machinery and Equipment
P. Materials Handling, Packaging, and Shipping Facilities
Q. Power Generation and Transmission (see also Electrical Equipment)
R. Weaving and Warp Preparation Equipment and Supplies
T. Yarn-Production, Twisting and Winding Equipment and Supplies

An * indicates additional data in the 1952-53 Pre-Filed Textile Catalog. This index is published as a convenience to the reader. Great care is taken to make it accurate, but Textile World assumes no responsibility for errors or omissions.

*Air-Perme-Ator Mfg. Co.	236	A
Alemite Div., Stewart-Warner Corp.	154	M
Allis Co., Louis	247	F
*Allis-Chalmers Mfg. Co.	30, 31	F Q
Alvey Conveyor Mfg. Co.	196	P
American Air Filter Co., Inc.	219	A
American Blower Corp.	88	A
American Crayon Company	276	E L R
American & Efird Mills, Inc.	288	G
*American Lava Corp.	181	L RT
American Lumber & Treating Co.	204	B
*American Moistening Co.	8	A
*American Monorail Co.	221	D
American Schweiter Co.	32	T
American Steel & Wire Div.	78	O
American Viscose Corp. (Yarns)	243	G
American Viscose Corp. Textile Chem. Dept.	185	C
Armco Steel Corp.	291	O
Armstrong Cork Co.	26, 27	T
*Atkinson, Haserick & Co.	20 to 25	T
Atlantic Rayon Corp.	240	G
Atlantic Steel Co.	216	O
*Atlas Electric Devices Co.	278	K
Bahnson Co.	213	A
*Barber-Colman Co., Textile Div.	275	R
Barnes Textile Associates, Inc.	276	N
Bausch & Lomb Optical Co.	235	N
*Becco Sales Corp.	169	C
Bemis Bro. Bag Co.	212	P
Benjamin Electric Mfg. Co.	199	F
*Bersworth Chemical Co.	249	C
*Blickman, Inc., S.	283	E
*Booth Co., Benjamin	285	T
Brush Electronics Co.	161	K
Bryant Chemical Co.	152	C
*Buffalo Electro-Chemical Co.	169	C
Bullard Clark Co., Jacobs Northern Div., E. H.	159	R
*Butterworth & Sons Co., H. W.	140	E
Calco Chemical Div., American Cyanamid Co.	89	C
Caldwell Co., W. E.	289	B E

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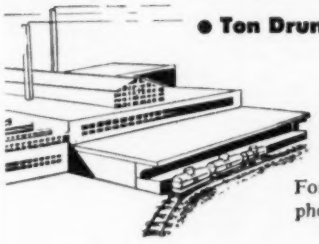

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617-29 Grant Bldg., Atlanta, Georgia

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Almost all water used in humidifying systems contains a certain amount of minerals and bacterial organisms. These are the troublesome contaminants that produce lime scale and slime. Allowed to accumulate these deposits cause frequent breakdowns and costly damage to expensive equipment.

One sure sign that humidifiers need attention is when slime is blown past baffles into the plant. Another shows up when slime or scale clogs lines and spray jets. Still others when overflows clog; when disagreeable odors rise from sump tank.

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Century Electric Co.	58	F
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*Coleman Co., Inc.	38	T
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*Dary Ring Traveler Co.	258	T
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Edroy Products Co.	274	N
Eisenberg Fibers, Inc.	287	G
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*Hayssen Mfg. Co.	257	P
*Heim Co.	64	R
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Textile Machinery Div.	179	F
*Huyck & Sons, F. C.	280	F
Hyatt Bearings Div., General Motors Corp.	56, 57	O Q
*Ideal Machine Shops, Inc.	263	N
Industrial Rayon Corp.	69	G
Industrie-Werke Karlsruhe	303	F
*Ives Co., L. T.	264	I

*Jacobs Northern Div., E. H. Bullard Clark Co.	59	R
Jenkins Bros.	47	H
*Jiffy Textile Marker Co.	286	E L R
*Johnson Corp.	278	H
Keever Starch Co.	211	C
Kenwood Mills, Noone Industrial Fabrics Div.	280	E
Kidde & Co., Inc., Walter	229	K T
*Kidde Mfg. Co.	267	L
Kuljian Corp., The	284	N
*Lambeth Rope Corp.	283	RT
*Lestershire Spool & Mfg. Co.	207	R
*Link-Belt Co.	7	Q
*Lockwood Greene Engineers, Inc.	34	N
*Loper Co., Ralph E.	288	N
Lubriplate Div., Fiske Bros. Refining Co.	242	M
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Manhattan Rubber Div.	86	Q
Manheim Mfg. & Belting Co.	96	Q
Maple Flooring Mfrs. Assn.	220	B
Marshall & Williams Corp.	249	E
*Mathieson Chemical Corp.	2	C
*McBride Co., Inc., Ed. J.	226	R
*McKiernan-Terry Corp.	271	E
*Merrow Machine Co.	214	E
Miller Motor Co.	55	E H O
*Milton Machine Works, Inc.	230	R
Minneapolis-Honeywell Reg. Co. Industrial Div.	66, 67	K
Mobilift Corp.	194	P
Moisture Register Co.	254	K
*Monsanto Chemical Co.	79, 80, 81	C
*Nash Co., J. M.	277	D RT
National Aniline Div., Allied Chem. & Dye Corp.	17	C
National Ring Traveler Co.	272	T
National Tube Div.	78	O
Naugatuck Chemical Div., U. S. Rubber Co.	195	C
Nopco Chemical Company	10	C
Oakite Products, Inc.	302	C
Oilgear Co., The	73	H Q
*Onyx Oil & Chemical Co.	97	C
Pabst Sales Co.	268	C
Page Fence Association	289	B
Parks & Woolson Machine Co.	200	E
Penick & Ford, Ltd., Inc.	236	C
*Perkins & Sons Inc., B. F.	70	E
Pfister Chemical Co.	280	C
Pittsburgh Coke & Chem. Co.	146	C
Pittsburgh Corning Corp.	191	B
Platecoil Div. of Tranter Mfg., inc.	198	E O
*Platt Bros. (Sales) Ltd.	20-21	T
Pneumafil Corp.	206	T
Potts Co., Horace T.	269	H
Powell Co., Wm.	251	H
Powell Valves	251	H
Precision Gear & Machine Co.	274	Q
*Prince, Smith & Stells	22-23	T
*Proctor & Schwartz, Inc.	148	E
Pure Oil Co., The	87	M
Raybestos-Manhattan, Inc. Manhattan Rubber Div.	86	Q
Reeves Pulley Co.	91	Q
*Reiner Inc., Robt.	16	L
Reliance Elec. & Eng'g Co.	43	F Q
Reynolds Metals Co.	82	B
Richmond Oil. Soap & Chem. Co.	240	C
*Ridge Tool Co.	190	H
*Riggs & Lombard, Inc.	72	E
*Rohm & Haas Co.	51	C
Rollway Bearing Co.	227	O Q
Rome Soap Mfg. Co.	289	C
*Roy & Son Co., B. S.	287	T
*Royce Chemical Co.	142	C
Ryerson & Son Inc., J. T.	230	O
*Saco-Lowell Shops	6	T
Sandoz Chemical Wks.	39	C
Schenley Distributors, Inc.	205	N
Scherr Co., Inc., George	286	K
Schlafhorst & Co., W.	11	RT
Schlumberger & Cie.	279	T
Schweiter, Ltd.	32	T
Shore Instrument & Mfg. Co., Inc.	288	K
*Simco Co., The	240	F L RT
*Sipp-Eastwood Corp.	210	T
Sirrine Co., J. E.	3rd Cover	N
*Smith, Drum & Co.	186	F
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Socony-Vacuum Oil Co.	19	C
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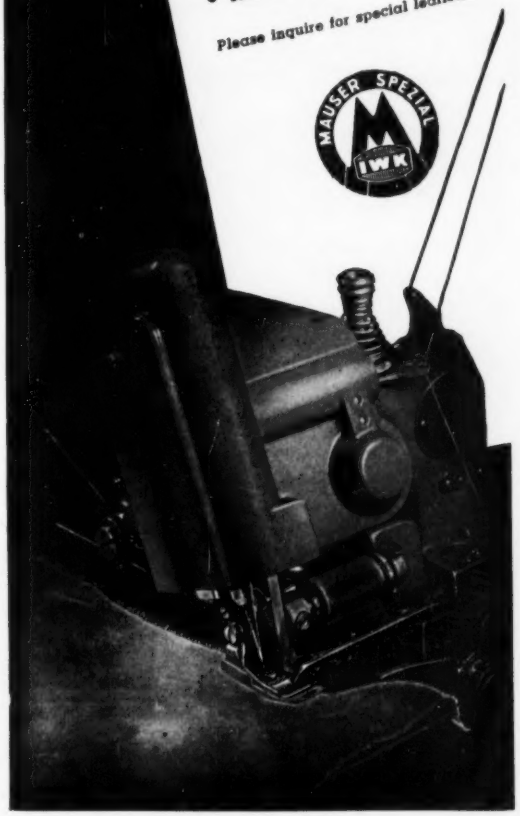

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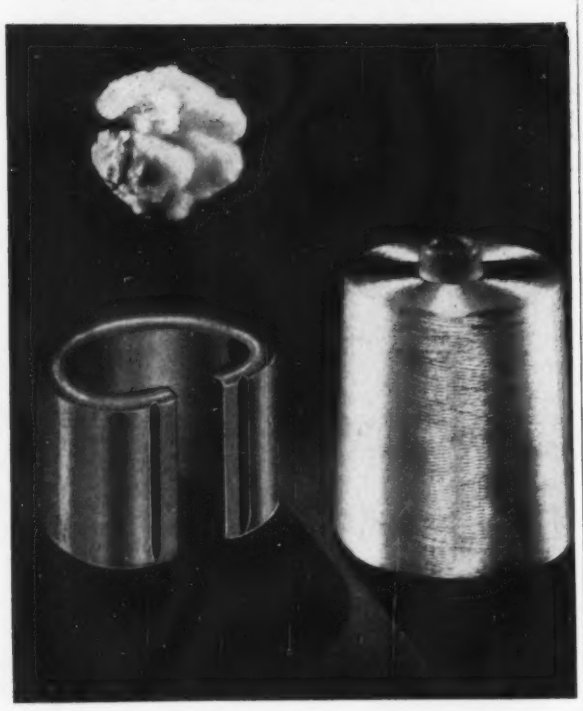

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*Stop-Motion Devices Corp.	281	L
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Tennant Co., G. H.	218	D
Tennessee Coal & Iron Div.	78	O
Tennessee Corp.	301	C
Texas Co., The	4th Cover	M
Textile Banking Co.	209	N
Textile Hall Corp.	281	N
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Toledo Scale Co.	222	K
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U. S. Steel Corp.	78	O
U. S. Steel Supply Div.	78	O
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Utica Novelty & Mill Spec. Co.	272	E
*Van Vlaanderen Machine Co.	93	E
*Veeder-Root, Inc.	33	K
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*Warner & Swasey Co.	44, 45	R
*Wayne Mfg. Co.	242	T
Westinghouse Electric Corp.		
Air Conditioning Div.	90	A
Micarta Div.	84, 85	O
Motors & Controls Div.	76, 77	F
Textile Industry	48, 49	O
West Point Fdry. & Mach. Co.	265	R
Whitehead Engineering Co.	246	T
*Whitin Machine Wks.	42, 60	T
Wildman Mfg. Co.	203	L
*Winsor & Jerauld Mfg. Co.	245	E
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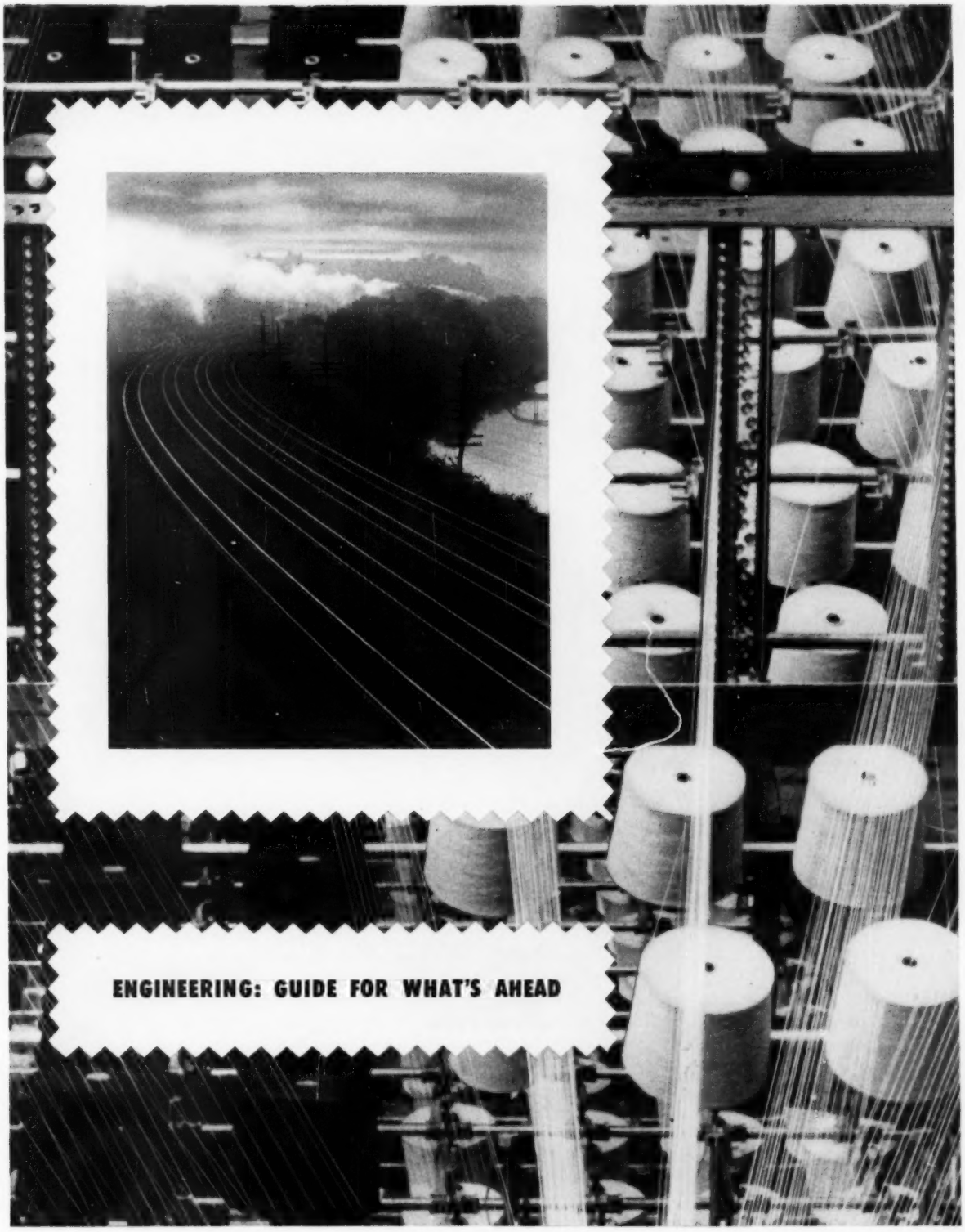

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